The OIL and GAS JOURNAL

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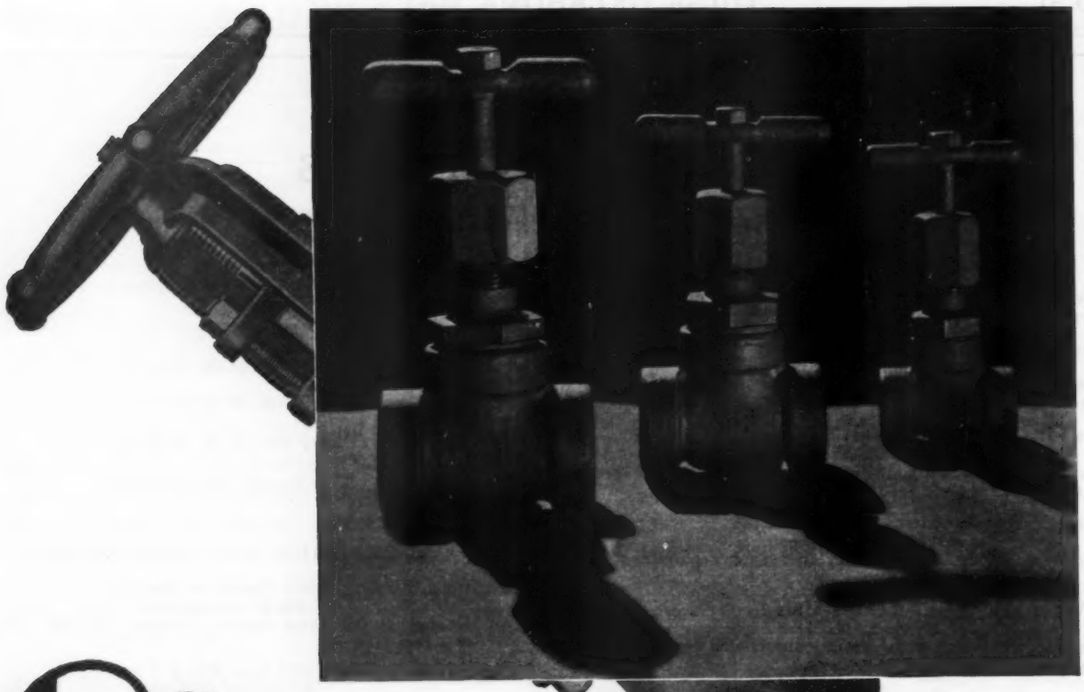

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Trend Is Towards Higher Price Level

Highest production in 1931, week ending Aug. 8, average daily output 2,551,807 bbls. Peak of U. S. production, week ending Aug. 24, 1929, average 2,975,435 bbls.

Developments in Petroleum Industry This Month Will Have Important Bearing. Much Depends on California

By Andrew M. Rowley

Lowest daily average crude oil production in the United States during 1931 was for week ending Sept. 5, with average output of 1,736,007 bbls.

Developments this month will wield an especially important influence on the status of the petroleum industry during this summer. Of primary importance, as this is written, is the election on the Sharkey Bill in California. The result of that election, which will be known by the time this appears in print, will be felt in all areas throughout the country. Adoption of the measure will insure enforcement of an equitable conservation program in California and will strengthen greatly the general situation everywhere. Defeat of the measure will serve to delay complete stabilization of the production situation. Some operators in the Los Angeles basin have failed to co-operate in curtailment measures and a continuance of this attitude might result in purchasers of crude oil refusing to buy from these operators.

The trend in the crude and refined oil markets is towards a better price level with indications this trend may result in higher crude oil prices within the next month or so. Defeat of the Sharkey Bill in California would complicate the situation somewhat and, probably, result in conditions which would delay realization of higher prices.

A thorough investigation of the situation in East Texas will be of benefit to the industry in general. Crude oil produced illegally takes away that much market from operators who abide by regulations while gasoline manufactured from such crude usually is "dumped" on the market regardless of price or cost of manufacture. In either case the legitimate operators and refiners suffer.

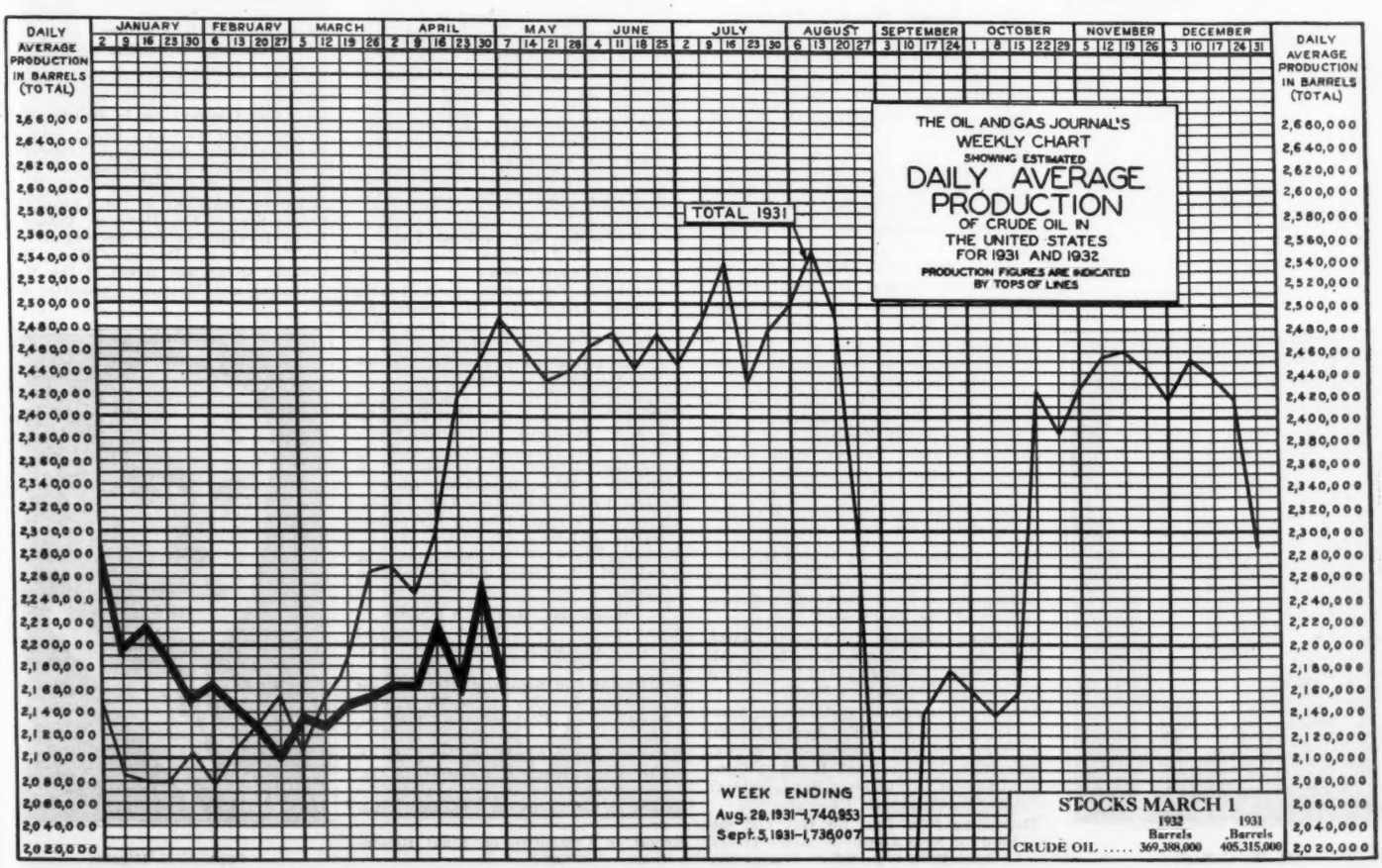
The industry is entering the season which will determine whether balance sheets will be written in red or black. There can be no argument over the statement losses incurred last year were due to low prices. There should be no division of opinion on the statement higher prices are necessary to correct this condition. Every effort should be made by producers and refiners to attain a higher price level and the more quickly such a level is reached the sooner the industry will be operating on a profitable basis.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of crude oil in the United States for the week ending April 30, and a comparison with the previous week follows:

	April 30	April 23
Oklahoma—		
Oklahoma City	88,335	137,945
Seminole-St. Louis	104,750	124,135
Remainder of State	205,630	206,435
Total Oklahoma	398,715	468,515
East Texas—		
Kilgore	103,755	107,914
Lathrop	124,717	128,480
Joiner	106,422	109,960
Total East Texas	334,894	346,354
West Texas	180,636	180,548
North Central Texas	72,590	73,495
Texas Panhandle	50,455	52,561
East Central Texas	56,341	56,535
Gulf Coast Texas	105,315	102,570
Southwest Texas	57,328	59,659
Total State of Texas	857,559	871,722
Kansas	94,635	98,235
North Louisiana	30,040	29,415
Gulf Coast Louisiana	34,395	34,256
Arkansas	34,940	34,920
Eastern fields	120,000	118,000
Rocky Mountain area	85,848	86,271
California—		
Santa Fe Springs	66,000	66,750
Long Beach	82,250	81,750
Playa Del Rey	18,000	18,000
Elwood	16,250	16,750
Kettleman Hills	62,250	60,750
Remainder of State	270,750	275,500
Total California	515,500	519,500
Total United States	2,171,632	2,260,834

→ Decrease, 89,202 Bbls. Daily ←



All Ready for Natural Gas Convention

Program Arranged Insures Interesting Sessions and Expressions of Leaders in the Industry Show Confidence in Future

By Thomas F. Smiley

Preparations for the annual convention of the Natural Gas Department, American Gas Association, which will open next Monday, May 9, in the Mayo Hotel, Tulsa, are indicative of the confidence with which leaders in the industry view the future. Expressions from men in various parts of the country who are planning to be present reveal expectations of increased business and continued progress along technical and scientific lines.

Both E. A. Olsen, president of the Oklahoma Natural Gas Corp. and chairman of the general committee on convention arrangements, and Robert W. Hendee, vice president of the Oklahoma Natural and vice chairman of the general committee, say that the number of applications for hotel reservations, the character of the papers and discussions scheduled and the wide interest manifested indicate that the Tulsa meeting will be one of the most profitable held since the Natural Gas Association of America discontinued its existence as a separate body five years ago and became a department of the American Gas Association.

Major T. J. Strickler
Chairman Natural Gas Dept., A.G.A.

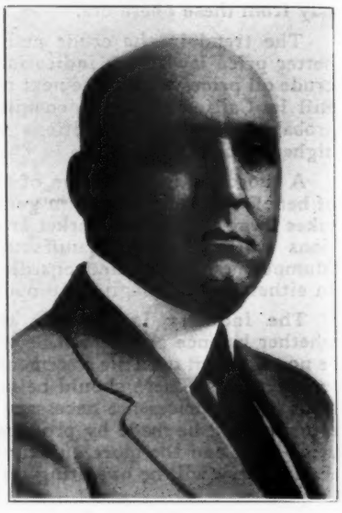
R. W. Gallagher
President American Gas Association

"I expect this convention to yield excellent results," said Mr. Olsen. "We have been through a trying year, but the large attendance promised is one evidence of the desire of men in the natural gas industry to discuss their common problems and clear the way for the brighter time that is coming." A. E. Higgins, Dallas, Tex., secretary of the department, has been visiting natural gas executives in different parts of the country. He reports an increasingly cheerful sentiment. Mr. Hendee, who is in charge of hotel reservations for convention delegates, says that a similar tone marks letters asking him to arrange for hotel accommodations.

Millions for Extensions

It is pointed out that while business conditions generally were drifting to unprecedently low levels during the last two years the natural gas industry was expending millions of dollars in extensions and improvements and in scientific research looking to the inevitable demands that will be made upon it with the upswing now believed near. It is estimated that more than $300,000,000 was spent in 1931 in the building of natural gas pipe lines, compressor stations and the varied equipment needed in carrying natural gas from the points of production to the points of consumption; and this vast amount of money, expended in what is designated as the worst year in the country's economic and financial history, is said to be at least $100,000,000 more than was spent in the same way in 1930. Directly or indirectly the natural gas industry is credited with having provided employment for millions of men and women throughout the long period of business stagnation which economists and industrial leaders now say is near the end of its course.

With this gratifying record already established, it is the purpose of those active in the natural gas industry to attack the difficult economic and engineering problems that have developed with the tremendous expansion of the last few years. Significant of the character of these problems are some of the subjects to be discussed at the forthcoming convention, including "Major Future Sales Problems," Samuel Insull, Jr., vice chairman Midland United Co., Chicago; "Oil, Gas and the Banks, and Their Relation to the Public Welfare," Walter S. Ferguson, vice president of the Exchange National Bank, Tulsa; "Dealer Co-operation, the Need and Justification for Utility Selling," LeRoy M. Edwards, general counsel Southern Counties Gas Co., Los Angeles, Calif.; "Dealer Co-operation by Affiliated Associations," A. E. Bettis, president Missouri Association of Public Utilities, Kansas City, Mo.; "Developing New Uses for Gas," Henry O. Loebell, vice president Combustion Utilities Corp., New York; "General Conditions in the Industry," E. B. Reeser, president Barnsdall Oil Co., Tulsa; "Rate Legislation and Taxes," Judge H. O. Caster, Henry L. Doherty & Co., New York; "Large Diameter Transmission Lines," Elmer F. Schmidt, general superintendent Lone Star Gas Co., Dallas, Tex.; "Recent Deep Drilling and Large Pipe Line Construction in the East," H. A. Wallace, president United Fuel Gas Co., Charleston, W. Va., and "General Utility Situation," J. F. Owens, president National Electric Light Association, Oklahoma City.



L. K. Langdon
Vice Chairman Natural Gas Dept., A.G.A.

Gas Conservation in Drilling

More than ordinary interest attaches to the scheduled discussion of "Conservation of Gas in Completion of Well Drilling and Gas Well Deliveries," by N. C. McGowen, president of the United Gas Public Service Co., Houston, Tex., and E. L. Rawlins, natural gas engineer in the United States Bureau of Mines, Bartlesville, Okla. The report of the Main Technical and Research Committee and

Capt. A. E. Higgins
Secretary Natural Gas Dept., A.G.A.

PROGRAM OF NATURAL GAS DEPARTMENT CONVENTION

Monday, May 9, 2 P.M.

Opening remarks—T. J. Strickler, chairman Natural Gas Department.

Invocation—Dr. C. W. Kerr, pastor First Presbyterian Church, Tulsa.

Address of Welcome—Mayor H. F. Newblock, Tulsa.

Address—E. A. Olsen, president Oklahoma Natural Gas Corp.

Address of the chairman—T. J. Strickler, vice president Kansas City Gas Co., Kansas City, Mo.

Appointment of Committee on Chairman's Address—L. K. Langdon, vice chairman, Natural Gas Department.

Presidential address—R. W. Gallagher, president American Gas Association.

Association Work—Alexander Forward, managing director American Gas Association, New York.

This Changing World, a talk on oil, gas and the banks, their relation to public welfare—Walter Ferguson, vice president Exchange National Bank, Tulsa.

Informal talks by gas company executives—Frank L. Chase, vice president Lone Star Gas Co., Dallas, Tex., presiding.

Tuesday, May 10, 9:30 A.M.

Appointment of Committee on Final Resolutions—T. J. Strickler, chairman Natural Gas Department.

Dealer Co-operation, the Need and Justification for Utility Selling—LeRoy M. Edwards, general counsel Southern Counties Gas Co., Los Angeles.

Dealer Co-operation by Affiliated Associations—A. E. Bettis, Missouri Association of Public Utilities, Kansas City.

Our Main Technical and Research Committee—H. C. Cooper, Hope Natural Gas Co., Pittsburgh, Pa.

Developing New Uses for Gas and the Need for Such Accomplishment—Henry O. Loebell, vice president Combustion Utilities Corp., New York.

Tuesday, May 10, 2 P.M.

General Conditions in the Industry—E. B. Reeser, Barnsdall Corp., Tulsa.

Rate Legislation and Taxes—Judge H. O. Caster, Henry L. Doherty Co., New York.

Large Diameter Transmission Lines—E. F. Schmidt, general superintendent Lone Star Gas Co., Dallas.

Water Vapor in Natural Gas—C. H. M. Burnham, Colorado-Wyoming Gas Co., Denver, Colo.

Wednesday, May 11, 9:30 A.M.

Wrinkles—H. J. Hoover, editor Natural Gas, Cincinnati, Ohio.

Natural Gas Fellowships—J. B. Tonkin, Peoples Natural Gas Co., Pittsburgh.

Recent Deep Drilling and Large Pipe Line Construction in the East—H. A. Wallace, United Fuel Gas Co., Charleston, W. Va.

Conservation of Gas in Completion of Well Drilling and Gas Well Deliveries—N. C. McGowen, United Gas Public Service Co., Houston, Tex., and E. L. Rawlins, natural gas engineer, U. S. Bureau of Mines, Bartlesville, Okla.

General Utility Situation—J. F. Owens, president National Electric Light Association, Oklahoma City, Okla.

Motion picture of Rumania's burning well—M. M. Kinley, Kinley Brothers, Tulsa.

Wednesday, May 11, 2 P.M.

Major Future Sales Problems—Samuel Insull, Jr., Midland United Co., Chicago.

Problems Met in Saturation Measurement and Control in Gas Lines—W. W. Frymoyer, The Foxboro Co., Foxboro, Mass.

Question Box and Discussion—J. D. Creveling, Henry L. Doherty & Co., New York.

Report of Committee on Chairman's Address.

Report of Committee on Final Resolutions.

Final business and closing remarks.

Men Taking Active Part in Natural Gas Convention

E. A. Olsen
Chairman General Arrangements Committee

R. W. Hendee
Vice Chairman General Arrangements Committee

H. C. Morris
Chairman Program Committee

B. F. Picard
Chairman Publicity Committee

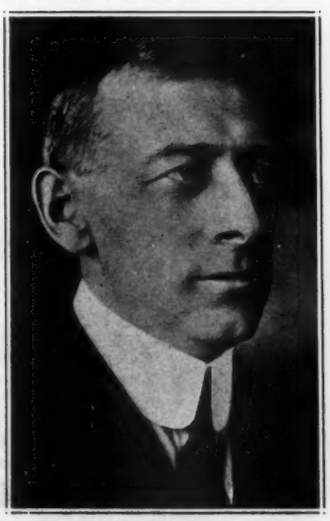
J. B. Tonkin
Vice President Peoples Natural Gas Co.

E. B. Reeser
President Barnsdall Oil Co.

Judge H. O. Caster
Henry L. Doherty & Co.

H. A. Wallace
United Fuel Gas Co.

E. L. Rawlins
U. S. Bureau of Mines



H. C. Cooper
Hope Natural Gas Co.

J. D. Creveling
Henry L. Doherty & Co.

N. C. McGowen
President United Gas Public Service Co.

subcommittees is of particular importance. It will be given by H. C. Cooper, chief engineer of the Hope Natural Gas Co., Pittsburgh, Pa.

Motion pictures will show the burning well in Rumania which was conquered by M. M. Kinley, of Tulsa, after it had resisted for almost three years all efforts to extinguish it. The reel shows Mr. Kinley's successful completion of the job.

The convention will be opened Monday afternoon at o'clock by Major T. J. Strickler, chairman of the Natural Gas Department. Following invocation by Rev. Dr. C. W. Kerr, pastor of the First Presbyterian Church of Tulsa, Mayor H. F. Newblock will extend a welcome to the delegates.

The visitors will have opportunity to inspect the Oklahoma Natural Gas Corp.'s system, characterized as one of the most highly developed in the world. B. F. Pickard, Jr., vice president of the company, and Mr. Hendee have made plans for taking care of all who may desire to see the plant. The company serves gas to Tulsa and about 60 other Oklahoma communities. Every detail of this modern system will be open to the convention delegates. Twenty-seven years ago the company, which later became the Oklahoma Natural, had 250 customers and these were served from one field, one well and 7 miles of pipe line. Now the company has more than 128,000 customers, owns more than 3,000 miles of pipe line and obtains its gas from more than 800 wells in 40 different fields.

All sessions of the convention will be held in the Crystal Ballroom of the Mayo. The subcommittee on Code for Testing Natural Gas for Gasoline Content will hold a joint meeting with a committee of the Natural Gasoline Association of America Monday forenoon. The meeting of the executive, managing and advisory committees will be held in the French room on the mezzanine floor Monday evening, with dinner following it in the English room. Registration desks will be on the main lobby floor.

Entertainment Features

Entertainment features scheduled include a barbecue and informal dance at the Tulsa Country Club Monday evening and a cabaret banquet and dance in the Crystal Ballroom of the hotel Tuesday evening. A bridge luncheon for ladies will be held in the hotel Tuesday afternoon. Prizes will be awarded. Automobiles and buses will leave the hotel at 6 o'clock Monday evening for the barbecue and dance at the Tulsa Country Club.

The committees in charge of plans for the convention follow:

General Arrangements—E. A. Olsen, chairman, Tulsa; R. W. Hendee, vice chairman, Tulsa; J. B. Corrin, Pittsburgh; P. E. Eddy, Chicago; T. H. Kerr, Columbus, Ohio; F. W. Kirk, Houston, Tex.; A. W. Leonard, Kansas City, Mo.; J. R. Munce, Pittsburgh; W. J. O'Brien, Memphis, Tenn.; F. F. Schauer, Pittsburgh; J. H. White, Birmingham, Ala.; W. S. Yard, San Francisco.

Program—H. C. Morris, chairman, Dallas; F. H. Brooks, Omaha, Neb.; F. C. Brown, Chicago; R. H. Hargrove, Houston, Tex.; R. C. Hoffman, Jr., Chicago; William Moeller, Jr., Los Angeles; H. L. Montgomery, Bartlesville, Okla.; E. A. Munyan, Cincinnati, Ohio; E. F. Schmidt, Dallas; George Wehrle, Denver, Colo.; T. R. Weymouth, New York.

Publicity—B. F. Pickard, chairman, Tulsa; R. J. Daugherty, Bartlesville, Okla.; John L. Fletcher, Shreveport, La.; Winfield Foster, Chicago; W. C. Grant, Dallas; C. D. Greason, Kansas City; W. M. Hines, Tulsa; Charles Jordan, San Francisco; Reid S. McBeth, Tulsa; Ray Ratliff, Kansas City; Paul Renshaw, Memphis; W. D. Thurber, Los Angeles.

VENEZUELA EXPORTS

WASHINGTON, D. C., Apr. 30.—Petroleum production in Venezuela during January totaled 1,419,861 metric tons, while exports during the same month were 1,443,698 tons, according to information received by the Department of Commerce today.—C. E. K.

Arrests for Oil Thefts in East Texas

Charges Filed Against 18 Men and More Arrests Expected. Judge Hurst Tells Grand Jury to Go the Limit in Inquiry

By L. E. Bredberg

FORT WORTH, Tex., May 2.—Two hundred and thirteen charges of theft have been filed in the Gregg County court against 18 men charged with by-passing and theft of oil from wells in the Gladewater area, western Gregg County, and Col. L. S. Davidson, in command of the National Guard troops in the district, has stated that there will be many more arrests in an exposure of alleged oil thefts in this area. Three troopers, detailed to do detective work in the Gladewater area, were taken into the confidence of the alleged theft ring, and learned location of by-passes and the amount of oil produced and run daily. This information led to the arrests.

The oil is said to have been stolen from five wells over a seven-month period. The arresting officers also destroyed a by-pass line found on a lease.

Included in the list of those arrested were a deputy supervisor in the State Railroad Commission's oil and gas division, a brother-in-law of a state official and a railroad agent.

In addition to the felony charges, County Attorney John E. Taylor of Gladewater said civil action will be taken to recover penalties ranging from $100 to $1,000 in each of the 213 offenses.

Those arrested were:

E. M. Daniels, Henderson, deputy supervisor, State Railroad Commission.

Paxton Grey, brother-in-law of Assistant Attorney General Fred Upchurch.

M. C. Torbert, Gladewater, station agent for the Texas & Pacific Railroad.

J. T. Harris, Center, operator of oil properties in Gladewater.

C. Harris, Center, operator.

The following oil field workers: John Whitley, Gladewater; Tom Tarkington, Lubbock; Ralph Durrett, Jacksonville; Fred McDonald, Claud, Okla., and Harold Dyers, Dallas.

Grey made bond on seven charges at $750 each at Longview Sunday afternoon. Several of the others are attempting to make bond.

Pressure Reduced by Theft

One of the wells from which it is alleged oil was stolen was on the property of the First Baptist Church at Gladewater. It is said pressure on offset wells was reduced 15 pounds in 10 days as a result of the thefts.

H. E. Fine, railroad commission gauger, was taken in custody at Kilgore. L. Swift, chief supervisor for the commission, discharged him from the employ of the commission a short time later. Swift already had discharged E. M. Daniels, another of the 18 men against whom charges of theft had been filed.

A warrant was issued for the arrest of George F. Lovick, Texas & Pacific freight agent at Longview. Military authorities said a check at the office of M. C. Torbert, railway agent at Gladewater, disclosed that his records had been stolen.

Judge Charges Grand Jury

Reports of fraudent operations caused Judge W. C. Hurst to instruct the Gregg County grand jury, to "go the limit" in bringing violators into court.

"Spare neither time nor expense in running down every clue to bring the culprits to justice if you find that men of position and influence, whether they operate as independents or for large companies and corporations, have allowed greed and avarice to take from our oil fields that which does not belong to them.

"In these days when poverty stalks the face of the earth and suffering is rampant in its remotest corrners, it has developed that we are in a favored spot. The richest oil field in the world is at our door.

"We have welcomed investors whether they be people able to buy only small royalties, or those able to develop large acreages. Many of our own people, after struggling for years to make a livelihood, find themselves with a competence for life if the same is properly conserved.

"Others with life savings have become the owners of mineral interests that must be given protection by our laws. If reporrts are true, there exists in this county a condition that will take much of your time, wisdom and patience."

Commission to Investigate

Chairman C. V. Terrell of the State Railroad Commission said he and Commissioner Lon A. Smith would go to Tyler to launch an investigation of the commission's personnel in the field.

"From the reports I notice that there are irregularities and violations of the law in the oil fields of East Texas which appear to involve some of the employes of the Railroad Commission," he declared. "A thorough investigation will be made at once by the commission and such action will be taken as the facts may warrant. You can tell the people of that section for me that the Railroad Commission will clean house from cellar to garret if facts justify it. Let the bricks fall where they may."

Colonel Davidson asserted that as much as two years had been cut from the life of some wells in the Gladewater area as a result of overproduction and theft of oil. He said offset wells in many cases had been damaged almost as badly. Some of the wells lost as much as 15 to 40 pounds pressure in the past five months. This equals 12 months' production under the allowable.

Texas National Guardsmen digging up lines from well in Gladewater area and discovering by-pass lines from a well to various outlets.

NEW EAST TEXAS FIRMS

DALLAS, Tex., May 2.—H. P. and D. T. Ross have organized the R. & H. Co., to do contracting and engineering work in East Texas, with offices at Tyler and Longview. D. T. Ross was formerly engineer for the Shell Petroleum Corp. at Kilgore, Tex.

The Em Ark Drilling Corp. has been formed to do all drilling in East Texas for the Arkansas Fuel Oil Co. and Empire Gas & Fuel Co. John Howell, of Gladewater, Tex., is vice president and general manager. The company will keep 10 rigs running on its affiliated company leases, with Mr. Howell in charge of the work in the district.

By-pass around pump house to a refinery and a company's storage tank.

Wax and Water Problems in East Texas

Engineers Are Giving Consideration to Future Requirements in This Great Pool as Anticipated Changes Take Place

By L. G. E. Bignell
Petroleum Engineering Editor

Many men interested in the petroleum industry are asking, "What will be the next step in the development of the East Texas oil field? How many more wells will be drilled? How soon will water hit the wells? How soon will they go on the pump? Is paraffin giving much trouble in producing this oil? What type of pumping equipment will be used when the wells cease to flow naturally?" These, and many other questions have some bearing upon the future trend of the oil business in other parts of this country.

While it is not to be inferred that all of these questions will be answered in a final way in this article, it will outline in a general manner some of the things that are being done in East Texas. First, it must be borne in mind that this is a large area and occupied by a great many operators and it will therefore be impossible to state what any particular group will do or how they plan to operate their properties. All of the major companies and most of the independents have very competent field men and data are being gathered from day to day to keep complete records of the performance of the wells.

The use of bottom-hole pressure gauges is quite common in this area. While some work has been done with these devices in other pools it is conceded that they have never been so extensively used as in East Texas. A number of companies are exchanging bottom hole readings and pooling this information so that comprehensive maps are made each month reflecting bottom hole pressure conditions for the entire field. This type of information for a field has never before been got together and by a study of it much is being learned about conditions in East Texas.

Variations in Pressures

The extreme eastern and western zones of the field have shown the greatest variations in pressure. A portion of the western part of the field in the Gladewater area still shows 1,600 pounds bottom hole pressure, due to water movement there. On the east edge in the Joiner area there exists the lowest pressure zone due to older wells and greatest withdrawals. The balance of the field shows pressures in excess of 1,400 pounds and it is estimated that wells will continue to flow so long as the pressures at the bottom of the hole are in excess of 800 pounds.

From these data it would seem that wells in the thicker sand areas would continue to flow naturally for a long time to come. However, areas of low pressure to the east will draw upon the adjacent higher pressure areas and as some of the eastern area, especially in the townsite of Kilgore, is being drilled very closely it is possible that the wells immediately to the west of those closely drilled areas will show rapid drop in bottom hole pressures.

Pumping Requirements

Only one or two companies with a large number of wells in the East Texas Pool have so far made a practice of installing pumping equipment in advance of actual requirements. There are many companies who are now making very careful studies of their future pumping requirements and planning ahead what they will install when their wells will cease to flow naturally.

This is a logical step and when all conditions are considered it would seem that it will be wise to actually decide upon pumping equipment now and make installations during the summer of foundations and other surface structures to be fully prepared to put in quickly the pumping machinery when needed.

During the past fall, winter and spring, rains have caused much delay in carrying on field work in East Texas. Parts of the field become flooded during the rainy season and water stood over the leases and around the wells and boats were needed to get to the properties. In other parts of the field the sandy soil becomes so full of water that high centers in the roads cause much trouble in moving material to the leases by trucks.

From experience in Seminole and other fields where mud and bad road conditions existed during active development periods it has been found that installation costs run up many times by such conditions. It would, therefore, seem that the operators in East Texas will be wise if they anticipate bad weather conditions by making all possible installations during the dry season when costs will be at a minimum.

There are many devices being offered that seem to have special value in the East Texas wells and they can be tried out now and their worth determined in advance of actual requirements. In this way it will be possible to learn the most efficient and economical means of producing wells after natural flow has ceased and these experiments should be carried on well in advance of the actual need for the equipment.

Types of Equipment

If the water drive that is now apparently moving through the producing zone becomes effective at high wells in this field it is possible that wells will flow for a long period. This statement is based upon the assumption that the field will be produced in the same restricted manner it is now being operated. However, even this restricted method of production has its drawbacks and may result in inequalities of bottom-hole pressure conditions, for closely drilled areas will draw upon adjacent higher pressure areas for their supply of oil.

It has been stated by competent eengineers who have made a close study of this problem that the oil and gas will move as one body from areas of high to areas of low pressure and this can only result in unequal drainage. It has been estimated that there will be about one well to each 15 acres in this field when it is completely drilled. If these wells were all equally spaced this would set up an ideal drainage condition, but such is not the case for in many parts of the field small tracts are being developed with closely spaced wells and in those areas the actual withdrawal of oil is much greater per acre than it is in other parts of the field where wider spacing of wells is practiced.

From knowledge of these conditions it is therefore possible to assume that some parts of the field where wells are not closely spaced bottom-hole pressures may drop more rapidly than they would normally and this may necessitate the installation of pumping equipment comparatively early in the life of the wells. As oil moves away from high-pressure areas to low-pressure zones it will drain past widely spaced wells because it has been observed in this field that each well has a drainage area adjacent to it that is limited in size by sand conditions and the effect of offset properties. It actually has been found on some large tracts that a line of edge wells has not fully protected drainage of the inside acreage for late wells drilled have come in at bottom pressures common to the whole area and have flowed at the same rate as the older wells.

So if it follows that low-pressure zones are established by drainage set up in closely drilled and produced areas there will come a time when it will be necessary to pump the wells to recover the oil. Later the water drive may become effective on these wells in the low-pressure zone and they may again flow but if pumping is not resorted to in this interval between the time low pressure is created at the wells and high pressure is again built up by the oncoming water much oil will be lost.

It is even possible that there will be a period when the fluid level in the wells will be high but there will not be enough pressure to actually flow them. In this type of well it is possible that light pumping outfits will serve to get the oil at the allowable rate because it is a fact that at the present rate of production there is more oil in the tubing and casing than can be withdrawn for one day's allowable. As more wells are drilled the allowable per well decreases and if 7,000 wells are finally completed in this 100,000-acre field the allowable per well at the rate of 325,000 bbls. per day for the pool will only be 46 bbls.

There are numerous small pumping outfits well suited to produce this quantity of oil. While many operators will consider them because of low initial investment others will prefer to be equipped for any emergency and install the regular beam type pumping outfits.

The common type working barrels seem well suited to handle this oil as no appreciable amount of sand has yet been produced with the fluid. This does not mean that special types of working barrels cannot be used efficiently and it remains for the manufacturers of such equipment to demonstrate the saving to be accomplished by the use of their equipment to sell it.

Flowing Well Troubles

While it may be uncertain as to the time when pumping equipment will actually be needed in the majority of East Texas wells the field man is already being faced with a number of other problems that require his immediate attention. Some are experimenting with tapered strings of tubing. The results so far secured are satisfactory, but with the bottom-hole pressures well in excess of that required to deliver the fluid to the surface it is hard to see where there is any particular efficiency obtained by using tapered strings.

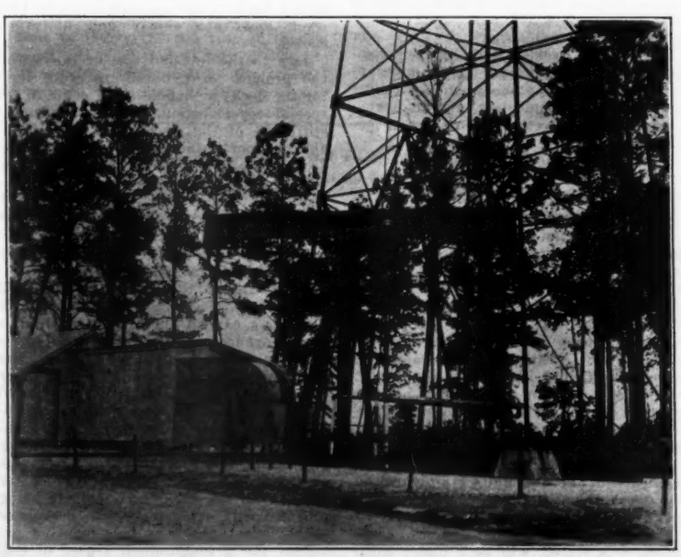
Any size flow string of continuous diameter between the bottom of the hole and the surface will deliver the oil so long as bottom-hole pressures in excess of 800 pounds are available. Small strings of tubing, 1 and 1¼-inch diameter, will probably be tried in wells cased with 6⅝-inch casing. It has already been used in the wells cased with 3 and 4-inch pipe and delivers all the oil that the well is allowed to produce.

Paraffin troubles have been common to the field but the velocity at which the oil has been produced has been sufficiently high to prevent much paraffin collecting in the well flow string. This condition will continue to exist so long as the daily allowable for the well is produced at the rate of from 25 to 50 bbls. per hour and the rate of flow is dependent upon the size of the flow string.

After the oil reaches the storage tanks there is a tendency for the paraffin to separate and form in a layer at the surface. This layer is broken when the tanks are run to the pipe line and this crystalline wax will settle on the tank bottom.

To avoid this it is suggested that all field storage tanks be made and kept gas tight so that there is always a layer of saturated gas immediately above the oil. The gas from the well is saturated and if it is not permitted to escape freely to the atmosphere it will serve as a medium for preventing evaporation of the upper layer of oil within the tank. The lighter hydrocarbons cannot escape to the gas above the oil if that gas is already carrying all the vapors possible. Gas-tight tanks will set up this condi-

PUMPING UNIT IN EAST TEXAS FIELD



Pumping unit on east edge well in Joiner area, Rusk County, Texas.

tion and the excess gas can be withdrawn through properly placed vents to gas lines running to gasoline plants, or to upright pipes where it can be burned.

Water Forms Emulsions

Another problem that is facing those operators in the field where water is produced with the oil is the elimination of emulsions. Wells on the western edge of the field are making water. It is reported that they will flow by natural pressure as much as 60 per cent water with 40 per cent oil. The bottom-hole pressure in such wells is high enough to produce the wells and still build up casing or tubing head pressures of from 150 to 250 pounds.

It has been found if this mixture of oil, gas and water is produced through chokes at the well head an emulsion will be formed immediately as the mass tends to create turbulent flow conditions in the line between well head and separator.

To eliminate this forming of emulsion it has been found that the well should flow into a water knockout and the production maintained at well head pressure until the water has been separated from the oil. The choke is placed between water knockout and separator and the oil and gas passed over to a pressure separator where these elements are separated. Separators working under pressure will not permit all of the entrained gas to escape from the oil and it is therefore necessary to pass this oil to gas-tight tanks where the pressures are maintained at slightly above atmospheric so that the gas can gradually escape and be drawn off through gas lines.

As more wells go to water this problem of fighting emulsions will increase and some operators prefer to introduce chemicals into the well to prevent cutting of the oil and this is giving good results. The amount of chemical required under that method of application is much less than what is needed if separation has to be made of oil and water after emulsification has occurred.

When Will Work Be Done?

To the supply men and manufacturers who are serving the petroleum industry the principal question is "when will East Texas operators make installations of new equipment?" They feel certain that this field will absorb a vast amount of pumping equipment in time, but their principal concern is how long will they have to continue to maintain field organizations at great expense before they can actually begin to receive orders.

With the present price of crude oil in East Texas giving the operators there some profit on their investments, it is only logical to assume that they will soon be in position to reinvest some of this money in material and equipment which they all admit they will need some time.

As the industry has depended upon the supply companies and manufacturers in the past for service in the new and old oil fields to permit them to carry on their operations it is only fair to that branch of the industry that the producers make their plans to spend money as soon as possible. This will not only permit the manufacturers and dealers in supplies to again begin to have an income after many months of hard going and small volume of business, but from the production company's viewpoint will permit them to make their installations in an orderly manner and actually at much lower costs than they could possibly expect if everything is left to the last minute and then they all rush in at once to get equipment and make installations.

There is no argument against orderly procedure in this field. The operators are all in accord on the question of orderly production. They are assured of an income in excess of actual operating costs at the present prices and demands for oil and even though wells should later be restricted to less than 50 bbls. per day each there will still be a good margin above expenses for the producers.

With field conditions bad during rainy weather and with costs mounting high when installations are attempted during such periods it will be wise for producers to anticipate their requirements to a reasonable extent and make their preliminary installations very soon. This does not anticipate that all wells will be equipped for pumping as soon as completed, but out of 5,000 wells now in or drilling in this field there are at least 90 per cent which have no pumping equipment on the lease. If these 4,500 wells will require on an average of $5,000 each for pumping equipment it will mean an ultimate investment of $22,500,000.

If this investment is made in 24 months it will mean the sale of about $1,000,000 worth of equipment monthly and this will give a steady income and volume of business for dealers and manufacturers which is more than they are now enjoying.

The study of bottom hole pressure data will give information from which experienced production men can base predictions as to which wells on their properties are most likely to have low bottom hole pressures first. To safeguard those wells against shutdowns of from 10 days to two weeks while pumping equipment is being installed, and taking the chance of their going dead for longer periods, pumping equipment requirements should be anticipated and the foundations set now.

Tide Water Has New Cracking Units

Company to Step Up High Octane Output With Completion of Plant, Which Involved Major Engineering Problems

By A. E. Mockler

New York Bureau, The Oil and Gas Journal, Suite 2803, No. 19 Rector Street

NEW YORK, May 2.—The Tide Water Oil Co. will enter East Coast markets on an extensive scale with a high octane number motor fuel this month with the company's Bayonne refinery operating two new type cracking units constructed by the Lummus Co. The new units will turn out gasoline of an advanced octane number.

The two new cracking units, which are designated in the refinery assembly as No. 5 and No. 6, represent the most modern and efficient design technically known to produce high octane number gasoline, according to the company. The combined capacity of the two units will be about 9,000 bbls. per day of fresh feed, producing approximately 5,200 bbls. per day of 375 endpoint motor fuel.

The new coils embody unusual and outstanding engineering and operating features which have been developed in Tide Water's engineering, technical and operating divisions, it is stated.

Crank and flywheel hot oil pumps driven by 460-horsepower single-tandem, double-acting, four-cycle gas engines supply the oil circulation to the heaters. This pumping combination represents the most modern and efficient design known today, according to the company's engineering department, having an extremely high overall efficiency. The pumps are designed to operate at 1,500 pounds discharge pressure and have a capacity of 26,000 g.p.h., measured at pumping temperature.

The heaters are described as being of the modern radiant type designed to operate at 950° F. to 1,000° F. coil outlet temperature. The tubes in the radiant section, in order to withstand these high temperatures and the corrosion encountered, are made of Nirosta steel, an iron-chromium-nickel alloy steel, much more suitable for high temperatures and pressures than ordinary steel.

Reaction chambers or soaking drums are made from a solid steel billet weighing 460,000 pounds which was forged and extruded to its present shape.

The fusion welded and X-rayed combined bubble tower and hot-air accumulator is the largest one ever constructed and shipped in one piece, and its transportation and erection were a major engineering feat.

Among the unique features of the new installation are the flashing of tar and a single secondary system for two heaters.

Wide Range of Charging Stock

The installation with its maximum flexibility makes it possible to crack and convert a wide range and selection of charging stocks, and produce maximum quality and yields from these stocks. For example, it is stated, it will be one of the ordinary operating procedures to charge a low octane number straightrun heavy naphtha or kerosene into the unit and reform it to a high octane number gasoline containing all of the desired qualities required by the modern high-speed, high-compression automobile engine.

The precision required to carry on the operation of the new units is provided by the most scientific and modern instruments and control available.

"Tydol" gasoline produced by these units, it is stated, will be a highly antiknock concentrate, similar to the synthetic and chemical antiknock fluids at present used in the industry.

Installation of the two new units at Bayonne has been watched with interest. Initial operations were started by the Lummus Co. last fall, but labor troubles retarded the work somewhat. The cracking coil provided by the Lummus Co. is said to have the largest throughput of any cracking unit so far constructed. The unit involves the use of a bubble tower 12 feet in diameter by 93 feet high, constructed for an internal working pressure of 150 pounds per square inch. The weight of the tower is 300,000 pounds.

Unit Completely Shop-Welded

While in ordinary construction procedure this tower might have been assembled at the refinery by either welding or riveting the sections together, the Lummus Co. engineers decided that the advantages of a completely shop-welded unit were sufficient to justify the handling of the shipment and erection on this unusually heavy vessel in a single fabricated unit. By completely fabricating the tower in the shop, it was found possible to X-ray all welded seams and to stress anneal the entire tower.

Through utilizing the facilities of its parent organization, the Babcock & Wilcox Co., the Lummus Co. succeeded in having the vessel fabricated in the Barberton, Ohio, plant of Babcock & Wilcox. Fusion weld was employed throughout, no rivets being used in any part of the tower. The result is a homogeneous structure without joints in the usual sense of the word and with welds stronger and denser than the parent metal of the adjoining plates. To insure uniformity of the welds, X-ray photographs were taken of every weld, through the use of a special X-ray machine operating at 230,000 volts. Upon completion of the tower, it was placed in a specially constructed annealing furnace where the temperature was raised uniformly to 1,200° F., maintained for two and one-half hours at that level, and then slowly and uniformly cooled.

Due to the unusual size of the tower, the problem of maintaining exact level for the decks or bubble trays came in for special consideration. Besides the usual stiffening of the deck, a central adjustable support was constructed for the decks and all the bubble caps on the decks were made adjustable with respect to the deck and to each other, thus compensating for minor irregularities in the decks after stress relief and establishing the bubble caps in a true level plane.

Shipment a Major Problem

Shipment of the bubble tower from Barberton to Bayonne was arranged for through a careful checking of structures and clearances throughout the rail routing. As the weight to be handled was far beyond the capacities of ordinary cars, the Erie Railroad, which carried the shipment, used two special depressed-center steel cars, built originally for handling gun shipments, and with capacity of 270,000 pounds each. The tower was mounted on steel bolsters at the center of each of the cars, each bolster being provided with a pin on which the bolster could swivel, the rear bolster being arranged for a longitudinal travel of 8½ inches to compensate for movement of the tower when occupying the position of a chord on the curves. A pressure grease gun was used to lubricate the bearings.

The shipment ran on scheduled time between terminal points, over the main line, the train moving at 10 miles per hour, during daylight hours only, keyed with controlled westbound traffic to assure freedom of movement at certain curves and other critical points. The distance from the rails to the top of the nozzles on the shell of the tower on the cars was 16 feet 9⅞ inches, just within the clearance of several overhead structures along the railroad. To clear the shipment through to Jersey City it was necessary to raise one bridge over the Erie tracks.

A car float of the Lehigh Valley Railroad took the tower at Jersey City and handled the cars down the North River to the Lehigh Valley terminal where the cars were handled over the Lehigh to the Tide Water's refinery line (East Jersey Railroad) at Bayonne, where a special track had been laid across the center of the foundation for the bubble tower. The two cars carrying the tower were spotted so the top of the tower was located in exact position for raising it.

Completion of the two new cracking units gives Tide Water one of the most modern refineries in the world. The company last year installed an Edeleanu lubricating oil unit at Bayonne, and the two new cracking stills, which will have combined capacity of some 5,200 bbls. of high octane number motor fuel, rounds out a modern refining layout.

GASOLINE TAX AS SEEN BY SECRETARY MILLS

NEW YORK, May 2.—Secretary of the Treasury Ogden L. Mills, addressing the City Bar Association on taxation, said:

"Take the gasoline tax, which is now imposed by every state in the union. The rates range from 2 to 7 cents per gallon, and are steadily being increased. In some places the tax is in excess of the market price of gasoline at the refinery. In its pressing need for money the Federal Government may legitimately feel that it is entitled to use this source to a moderate extent, especially in view of the fact that the Federal Government grants the states substantial monetary aid in their road-building programs—the very purpose for which the gasoline tax was primarily introduced. Yet, because of the pre-emption or prior use of this tax by the states and the high rates in force in some states, the Federal Government must pause and consider before adding a federal tax, though federal entry into this field might help the states in the administration of the tax, which is tending in some places to break down because of the bootlegging of gasoline.

"There has developed a gasoline bootlegging racket of quite sizable proportions which, according to one competent authority, is depriving the states of $100,000,000 of revenue yearly. Much of this evasion is directly attributable to the purchase of gasoline in a state with a low rate of tax and its sale in a state with a high tax. The states cannot adequately check the purchases and sales of the retail service station."

Chicago Refiners To Supply Gas to Extended Public Service System

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By Robert C. Conine

Extensive utilization of by-product gas from three refineries in the Chicago district is promised in the current activities of the Northern Indiana Public Service Co., Hammond, Ind. The plants from which the refinery gas is being taken or will soon be taken are those of Shell Petroleum Corp., Sinclair Refining Co., and Empire Oil & Refining Co., all in East Chicago. Contracts for the purchase of gas from the Sinclair and Empire companies are effective this year, while the Shell corporation has been selling its refinery gas to the utility since 1928. These contracts reflect the growing importance of the refinery gas as a blending fuel to raise the heat content of steel mill gas in the Northern Indiana Public Service Co.'s gas distribution system.

Although the Sinclair company has not started to deliver gas to the utility, its contract was effective January 1. All of the necessary pipe line and other installation work has been completed. At the Empire plant only the preliminary work has been carried out and the gas sale contract is not expected to be ready before July 1.

In the territory of the Northern Indiana Public Service Co. refinery gas, mixed with steel mill gas, was first used for residential purposes in Michigan City and Valparaiso and in a few homes near South Bend which are immediately adjacent to the 75-mile 10-inch gas pipe line extending from East Chicago to South Bend. This was in the spring of 1931. A saving of approximately $35,000 was passed along by the company to the users of gas service.

A temporary setback to plans of the utility company to utilize greater quantities of refinery gas resulted when a Public Service Commission of Indiana ruling, adverse to the then used therm basis of billing consumers, was handed down. At the time of this ruling the company had laid out a definite program for introducing high B.t.u. gas into the Hammond-East Chicago-Whiting residential district. It is expected, however, that the utility company will proceed with plans this spring or early this summer and that $117,000 in savings to the company will be passed along to the consumers.

Plans for extending refinery blend gas into other parts of the company territory are at present only in the planning stage. Just what will be done in this regard, following the introduction of 1,000 B.t.u. gas into the Hammond-East Chicago-Whiting area, has not been definitely decided.

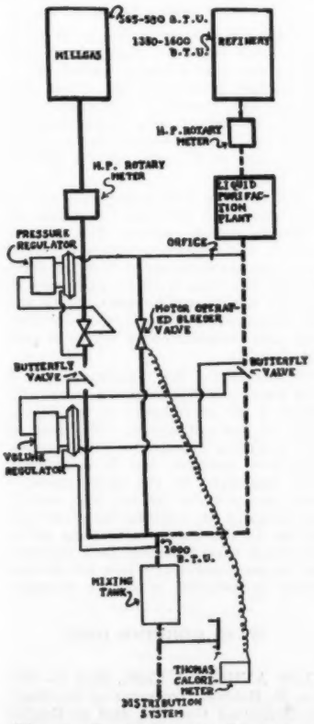
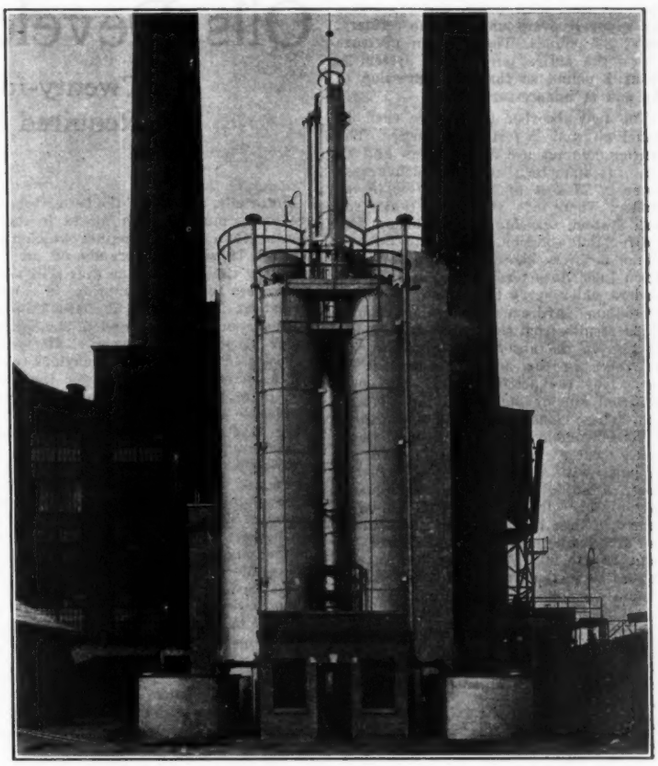


Fig. 1—Arrangement of meters and other equipment to effect balance between volume of mill gas and refinery gas.

Processing of Gas

Now to follow the progress of the by-product gas from the refinery to the jets of consumers. The gas from the refinery is metered and goes to the Seaboard Purification Process plant about 1 mile away. This plant performs 100 per cent removal of hydrogen sulphide on 3,000,000 cubic feet of refinery gas daily. The gas has an average of 1,450 grains of H_2S per 100 cubic feet, although a high mark of 2,400 grains is reached. A number of unique features are incorporated in this liquid purification and dehydration plant and a detailed description is taken up in this article.

Figure 1 shows diagramatically the balancing arrangement which insures a uniform mixing of the refinery gas with the steel mill gas. Both mains are under control of a Smoot 3¾-inch oil operated pressure regulator and a Smoot 5½-inch oil operated volume regulator. A motor operated bleeder valve is shown electrically connected to a Thomas calorimeter. The enriched steel mill gas varies in B.t.u. content from 565 to 580, while the refinery gas varies from 1,350 to 1,600 B.t.u. At the output of the mixing tank the B.t.u. content of the gas blend is 1,000. This 1,000 B.t.u. gas goes to the territory where it is consumed.



Seaboard Gas Purifier at the Hammond, Ind., plant of the Northern Indiana Public Service Co. through which refinery gases pass before going into the pipeline for general distribution.

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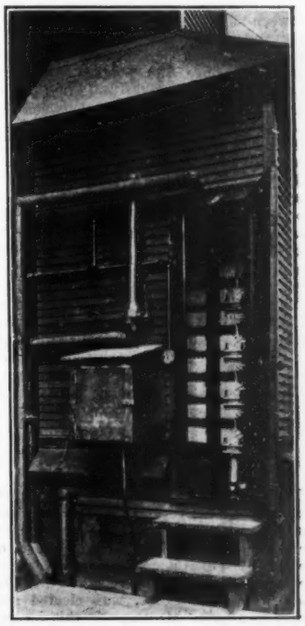
The purification and dehydration plant in East Chicago, according to engineers, represents one of the latest advances in the process for removing hydrogen sulphide from gas. The high H_2S content of the gas processed, reaching as much as 2,400 grains per 100 cubic feet of gas, and the necessity for obtaining 100 per cent H_2S removal, account for the comparatively low capacity, 3,000,000 cubic feet per day, of this large plant which incorporates two distinct systems which are connected in series. In this plant the pressure at the inlet of the



Evaporator coils and sump where proper specific gravity of brine is maintained.

OPERATING DATA ON PURIFICATION PLANT

Oil

Flow—Between 500 and 600 gallons per hour.
Temperature—Ranges between 70 and 85.

Brine

Flow—Between 1,200 and 1,600 gallons per hour. (At present we use 1,600 gallons per hour with a specific gravity of 1,360 to 1,390.)
Temperature—Brine temperature usually ranges from 55° to 85° F. The use of the evaporator is responsible for most temperatures above 75°.

Soda Solution—Actifiers

Flow—8,000 to 8,500 gallons per hour.
Temperature—Betwee 60° and 70°, usually.
Pressure—25 to 30 pounds.

Soda Solution—Absorbers

Flow—6,000 to 7,000 gallons per hour.
Temperature—60° to 70°.
Pressure—55 to 60 pounds.

Alkalinity of Soda Solution

North System—Between 1.5 and 2 per cent.
South System—Between 2 and 2.5 per cent.

Average gas purified per month	48,047,000 cu. ft.
Average amount soda per month, 6,400 lbs. 200 lbs. per bag, .013 per lb.	32 bags
Average amount cal. chloride per mo. 2,200 lbs. 100 lbs. per bag. .018 per lb.	22 bags
Average amount of oil, 28 to 30° Be. oil .068 per gal.	200 gal.

absorbers or scrubbers is practically the same as that with which the gas leaves the vapor recovery units at the refinery, about 35 pounds. The drop in pressure across the entire purification system is about 1 pound so that recompression of the gas is unnecessary.

The two absorber towers are each 47 feet high and 7 feet in diameter. The actifier columns are 57 feet high and 13 feet in diameter, and the dehydrator tower is 77 feet high and 3 feet in diameter. There are two soda tanks for each system, one for clean solution and one for foul solution. A view of the top of the actifiers shows the foul soda solution inlet lines terminating in 18-spray headers which spray the sodium bicarbonate-sodium hydrogen sulphide liquid, which results from the hydrogen sulphide reaction in the absorbers, down through the trays in the actifiers where it is cleaned by the actifier air stream coming from one or more of three Clarage fans. These fans each have a capacity of 750,000 cubic feet of air per hour at 3-inch water pressure. Each fan is equipped with a 20-horsepower General Electric motor and flexible couplings. The air is drawn from the outside through steam coils. During the winter the air temperature is maintained at about 85° to 90° F. The headers in the dehydrator sections have three sprays for calcium chloride brine solution and three for oil. The absorbers have headers with seven sprays for clean soda solution. The oil sprayed in the last section of the dehydrator removes entrained brine from the gas and serves to saturate the gas with oil.

A general interior view of the main pump room is shown. The five soda solution pumps are Gould centrifugal and are each directly connected with a General Electric 20-horsepower motor with individual starting equipment on each motor. The two calcium chloride brine solution pumps and the auxiliary oil pump are also Gould pumps and are connected with General Electric 5-horsepower motors. The auxiliary oil pump is next to the stairway. This permits the operator to put oil from the reserve tank into the system under any pressure that the system may be carrying. The oil and brine pumps operate in connection with the dehydrator. A Gould centrifugal four-stage pump is used to spray oil into the dehydrator. This is 28-30° Baume oil.

The oil flows into the dehydrator at a rate of between 500 and 600 gallons per hour, and at a temperature of between 70° and 85° F. The flow of the brine solution, which has a specific gravity of 1.36 to 1.39, and a temperature between 55° and 85° F., is between 1,200 and 1,600 gallons per hour. The evaporator is responsible for most temperatures above 75° F. The soda solution flow is from 8,000 to 12,000 gallons per hour at temperatures between 60° and 70° F. In the absorbers the soda solution flows at a rate of 8,000 to 12,000 gallons per hour at a temperature of 60° to 70° F. The air temperature during winter months is 85° F., and flows at the rate of 750,000 cubic feet per hour. Higher temperatures are required in the actifiers and steam is used to provide this heat. The air flow is kept as low as possible in obtaining complete purification. The air leaves the actifiers at approximately the same temperature as the solution, so that if the air rate is low and the solution temperature is low the solution will not be actified properly and the H_2S will not be entirely removed.

OFFICERS ELECTED

The Stratigraphic Society of Tulsa recently elected Bruce Harlton, Amerada Petroleum Corp., Tulsa, president to succeed Charles Ryniker. John Ware of the Skelly Oil Co., Tulsa, was elected vice president, and Robert M. Whiteside, Shell Petroleum Corp., was elected secretary-treasurer. Meetings of this society are scheduled for the second and fourth Wednesday of each month from October to May and are held in the Tulsa Building, Tulsa.

Oils Developed More Than Engines

Twenty-four Different Lubricants Declared to Be Required If Demands of Manufacturers Are Heeded

By A. Ludlow Clayden
Research Engineer, Sun Oil Co.*

Motor oils, at least of the better brands, are today much further ahead in development than are the engines which they service. If six good brands of oil are tested in the same engine they will show differences in oil consumption, in carbon formation, in sludge accumulation, in the development of acidity and in some other minor respects. If, however, the same oil is tested in six identical engines taken off the same production line on the same day, there will be much more difference observable between one engine and another than between one oil and another in the first series of tests.

Going a step further and considering engines of different design, an oil of only average quality may give a better performance in one engine than an oil of the highest possible quality will give in another engine. Some engines do require high grade oil, others will do equally as well on a less highly refined lubricant.

The rate of wear in an engine in so far as it is affected by oil will bear some kind of proportional relationship to the average condition of the oil in the crankcase. Other things being equal, a high-grade oil will change less during a definite period of use than will a less highly refined oil, so that whatever the oil performance characteristic of the engine may be, the use of good quality lubricant is justified. Since oil is such a very minor item of operating cost, it is impossible to justify the use of anything except the best grades of oil.

Furthermore, the retail price of motor oil is unusually high compared with the manufacturing cost, that is to say, the cost of distribution and of servicing the individual automobile in small quantities is the major factor in the retail price. The reduction in retail price made possible by substituting an average grade of lubricating oil for the highest type of product is an insignificant amount when compared with the retail price of oils as sold by the quart at filling stations. Oils which are offered to the motorist at low prices derive those prices much more from differences in the merchandising scheme than from differences in the base cost of the material at the refinery.

*Before semiannual meeting National Petroleum Association, Cleveland, Ohio, April 21-22, 1932.

One Grade Should Be Enough

Thus, on a technical basis, there is no justification whatever for more than one grade of motor oil and that should be the best type we know how to make.

The cost of lubricating an automobile engine is extremely small, but the necessity for always remembering it, of having to check the quantity, of having to replenish, and occasionally to change oil, is something which any driver would be glad to be able to forget. The motorist's ideal would be an engine lubricating system requiring attention no more frequently than the transmission or the rear axle. Such a development is by no means impossible, although it is fairly improbable.

All automobile engines are so designed that the bearings require a fairly copious supply of oil; feeding the requisite amount to the bearings causes the cylinders to receive an enormous oversupply. As running speeds increase this condition becomes worse and worse. Oil consumption per engine revolution goes up with speed at a tremendous rate. No automobile engine has a system whereby the quantity of oil supply at various points varies in proportion with the momentary requirements. In fact, except for the addition of accessories, nothing has been done to the lubrication system of an automobile in the last 20 years. Oil filters and crankcase ventilators certainly help to counteract bad conditions, but those conditions might not arise if fundamental changes were made in the design of lubricating systems. Oil temperatures regulation is not to be put in this class, since temperature regulations should be part of any lubricating system for any machine.

It is, of course, absurd that motor oils of so many different viscosities should be demanded. If lubricating oils had been elements instead of compounds, and if nature had provided us with only two, let us say, one of them 100@100 and the other 100@210, and furthermore assume that they could not be mixed to produce intermediate viscosities, engineers would not have been handicaped by the necessity for designing machines to suit one or other of these fixed viscosities.

At the present time the well-equipped service station with both truck and passenger car business has to carry at least three viscosities of oil in the summer and three in the winter, with only one overlapping grade. This is one of the reasons why the distributional cost of motor oils is so high and it is rendered necessary by the very wide variation in engine characteristics. Suppose it had been necessary to set up seven different grades of S.A.E. gasolines, of which six would be in constant use and three always available; that each of these grades could be made of regular or of premium quality, and possibly in third grade quality also, and you have a picture absurdity which needs no elaboration. The present motor oil setup is almost equally absurd.

Circumstances are not changed unless there is reason for changing. The nature of the raw material with which we deal compels us to produce a fairly wide range of types of lubricant; therefore, lubricating oil is most efficiently utilized when we have machines whose requirements differ in the same proportion over the same range. It would be a calamity if all automobile engines were to be designed to require oil of just one viscosity —a calamity for the motorist as well as for the oil industry—but this does not mean that the present scheme is therefore a good one. A reduction in the number of S.A.E. motor oils and narrowing the range for each number could not fail to be of great general advantage.

Chassis Lubrication Appalling

What we now see before us in chassis lubrication is little short of appalling. There are now actually called for by automobile manufacturers, three transmission oils, three E.P. transmission oils, three free wheel oils, three E.P. free wheel oils, seven special type of chassis lubricants, or a total of 19 different articles.

Add to this five motor oils and we have two dozen different substances that a service station requires if it is to follow all the recommendations of all the motor car manufacturers. Now, of course, nothing like this is really necessary and nothing like it ever happens. Since these two dozen articles are not really necessary they certainly ought not to be called for.

Of course, the E.P. lubricants and the free wheel oils represent the co-operative effort of the oil industry in the development of the automobile. We must expect recurring demand for new materials with new qualities, but in co-operating with engineers in the development of such products, let us not lose sight of the necessity for substituting rather than adding. In this endeavor we may not expect much encouragement from engineers, but we may confidently look for the most hearty co-operation of service managers.

MERGER OF SINCLAIR PRAIRIE UNITS SLOWLY TAKING SHAPE

The recent merger of the Sinclair Consolidated Oil Corp., Prairie Oil & Gas Co. and Prairie Pipe Line Co. into the newly formed Consolidated Oil Corp. has been followed by the first steps in the reorganization of some of the subsidiaries of the new company. The Sinclair Oil & Gas Co. and the Prairie Oil & Gas Co. and their respective subsidiaries have become the Sinclair Prairie Oil Co. The Sinclair Texas Pipe Line Co. and the Prairie Pipe Line Co. have become the Sinclair Prairie Pipe Line Co. The crude oil purchasing has been taken out of the hands of the Sinclair Refining Co. and put in charge of the Sinclair Prairie Crude Oil Marketing Co.

The next step was to officer and man these various companies. Up to now the various organizations are far from complete. It will be some time before they will have become smoothly running and before it will be known who will man the various departments of the big combine.

Some of the officers of the subsidiary companies have already been named by The Oil and Gas Journal. The names of other officials have since been learned and it is known definitely that the Sinclair Prairie Oil Co.'s official roster is composed of the following: William L. Connelly, chairman of the board; Henry L. Phillips, president; Dana H. Kelsey, vice president in charge of land operations; H. B. Smith, assistant to the vice president; A. E. Barrus, treasurer; Edwin H. Chandler, general counsel; A. J. H. Carnegie, auditor; H. A. Woodard, purchasing agent; W. A. Martin, general superintendent of production; Glenn Harroun, Tyler, Tex.; Emmett Dougherty and John A. Wolfe, Tulsa, district superintendents. Harroun will have charge of production operations in Texas, Louisiana and New Mexico; Dougherty's division lies between the Arkansas River on the north and the Red River on the south; and Wolfe's division includes Kansas, and the Oklahoma territory north of the Arkansas River. The company's headquarters will be in Tulsa.

Very little can yet be said as to the personnel of the Sinclair Prairie Pipe Line Co., which will have its headquarters in Independence, Kans. All that is known is that C. H. Koontz is chairman of the board; J. R. Manion, president. R. B. Hanna, secretary and treasurer; Edwin H. Chandler, chief counsel, and H. A. Woodard, purchasing agent.

The Sinclair Prairie Crude Oil Marketing Co. will make Tulsa its headquarters and will occupy offices in the Exchange National Bank Building. Nelson K. Moody is president of this subsidiary; E. B. Marlow and H. A. Meyer, vice presidents; A. B. Hookins, secretary and treasurer; E. H. Chandler, general counsel, and C. R. Walts, superintendent of steel storage.

W. E. ROBBINS DIES

LOS ANGELES, Calif., May 2.—William E. Robbins, treasurer of the Southern California Gas Co., died at Garfield Hospital, Monterey Park, after a four weeks illness. Mr. Robbins entered the employ of the utilities company six years ago.

GOOD NEWS

Dollar crude cheers the industry but it's tough on the skimming plant

Straight-run gasoline today won't sell for enough to pay for the crude and you can't sell straight-run fuel oil

Dubbs crack the oil Then you get:

Better gasoline and more of it

Better fuel oil and less of it

Better prices

Profits

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

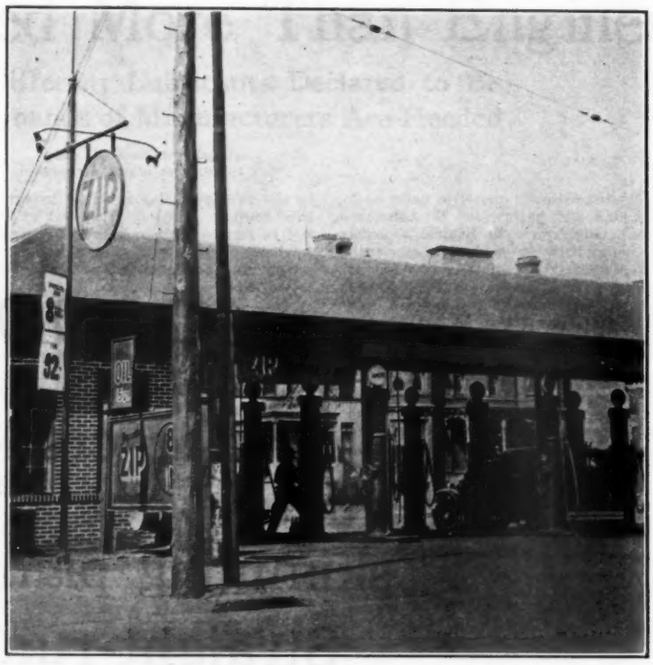
Detroit Area Scene Of Unusual Retail Marketing Conditions

* * * * * *

By C. O. Willson

DETROIT, Mich.—This city, which for several years has been the "dumping ground" of refinery markets, continues to be the scene of unusual retail marketing conditions. At this time the retail price for gasoline of all grades is from 4 to 4.5 cents per gallon under what is considered normal, with one jobbing concern, featuring imported products, selling approximately 20 per cent of all the motor fuel distributed in the city.

An exhaustive investigation probably would develop several angles as to the reasons why local marketing conditions have not been satisfactory to distributors of practically all classes of petroleum products over the greater part of the past five years. Fundamentally, according to the executive of a Detroit company, the trouble is due to the fact that during the course of a year refiners scattered from the East Coast to Texas find occasion to "dump" excess supplies of refinery products on the local market. Detroit is a large consuming center and, according to this authority, refiners in the Gulf Coast, Mid-Continent, Kentucky, Pennsylvania and the Atlantic Seaboard too often find it expedient to get rid of excess material locally at distress prices.



One of the 32 stations of the Sunny Service Oil Co. which are averaging 3,800 gallons of gasoline daily, per station.

* * * * * * * * * * * *

Regardless of what may be the causes, this city, as explained by another filling station operator, has become a "laboratory" for testing all kinds of marketing plans. There is hardly a scheme devised for attracting the consumer purchase of petroleum products which has not been tried out by one or more marketers.

At this time, the success of the company previously mentioned in building up what is believed to be a record gallonage per unit of distribution is attracting wide attention among those engaged in bulk station and retail operation. Without attempting to pass on the merits or demerits of the practices which have made this large volume possible, the writer proposes to explain briefly the operations of the company together with the observations on petroleum marketing obtained from the president who has guided its activities since it was founded.

The visit here was made with the idea that the company's success was based on enlarged price-cutting operations coupled with the exploitation of the sale of imported products. Investigation, however, has led to the conclusion that aside from these features which are more effect than cause, original merchandizing methods consistently adhered to have played a part in the steady growth of the business. It is believed that these methods will be of interest to an industry which is giving more attention than ever before to the question of whether or not many of the present practices common to the entire industry should be continued in the future.

Scope of Operations

The company is the Sunny Service Oil Co. and its president and active head is Charles E. Austin. The company has been operating for approximately five years in Detroit. The operations have been expanded to 32 drive-in stations, all within the city limits, except one located across the river in Canada.

The company until last fall operated exclusively with gasoline purchased from refiners in this country. The aim of the company always has been to obtain a large gallonage per station and no units have been added until the management was certain that the new station could maintain a gallonage in line with that built up at the stations already operating.

Late in the summer of 1931, the company attracted wide attention when it was announced that a gasoline contract had been closed with the Steaua Romana, a Rumanian company with French and English capital. The gasoline was transported to Montreal in a large tanker and then brought to Detroit by smaller boats as needed. With the close of the Great Lakes shipping season the tanker shipments have been unloaded at Baltimore and brought to Detroit by tank car. The all water shipments via the Great Lakes will be resumed in the near future. The company recently let a contract for 10,000,000 gallons additional steel storage to be built at the Detroit terminal. With this additional capacity the company expects to store a large part of the gasoline that will be required for winter months and the penalty of the tank car shipments from Baltimore to Detroit will be avoided.

Not Price Cutter

Mr. Austin emphatically denies that he belongs to the class of price-cut operators and he also states that his success has not been due to the sale of imported gasoline. In regard to the first contention he points out that at present, gasoline is being sold in Detroit under his price and that situation has obtained frequently since he opened his first station. As to the importation of gasoline, he says his business was firmly established on the sale of domestic gasoline and he still handles a domestic grade.

At this writing, the following prices are in effect at the Sunny Service stations: Imported Zip, 12.5 cents per gallon and Domestic Gasoline 11.5 cents. Most of the competitive companies meet the Imported Zip price with their regular gasoline and a third grade selling at the 11.5-cent price. Ethyl Gasoline as sold by the competitive companies brings the usual 3-cent premium over the regular grade. Based on prices prevailing in Michigan and other Middle West points, present retail prices at Detroit are about 4.5 cents per gallon under what would be considered normal. Figured on a monthly gallonage of around 27,000,000 gallons in Detroit, this means a net reduction in marketing revenue in excess of $1,000,000.

The Sunny Service stations sell a regular grade of motor oil at 15 cents per quart and a regular Pennsylvania grade at 25 cents per quart. These prices are 10 cents under the normal price structure, although motor oils are being sold at retail stations in Detroit as low as 10 cents per quart with a large package business in all grades with attractive low prices. The Sunny Service stations also offer motor oils in cans. Both the regular and Pennsylvania retail grades are sold at the service stations in sealed measures for the protection of consumers.

Large Gallonage

The 32 retail stations of the Sunny Service company at present are averaging 3,800 gallons of gasoline per station with the best station selling 7,000 gallons or almost a tank car of gasoline daily. The company claims only 12 per cent of the gasoline gallonage in Detroit, but information from other sources would indicate that the figure was closer to 20 per cent. The station in Canada where the number of cars per capita is much less than in Detroit is maintaining an average gallonage of the chain.

The 3,800 gallons per station per day compares with an average around 200 gallons per day for approximately 900 drive-in stations operated by competitive companies. The remainder of the gallonage is handled through dealers.

No Dealer Accounts

Sunny Service products are sold exclusively through company owned stations, no sales being made through dealers or jobbers.

"Why should I sell through dealers?" Mr. Austin asked when this feature of his marketing policy was discussed. "The great bulk of the gallonage obtained by these dealers in the final analysis would be taken from my own stations. Thus I would lose at my stations in profits more than I could possibly make through the dealer accounts."

In this connection, Mr. Austin is critical of the policy of guaranteeing dealer accounts a certain margin on which to operate. This margin in many cases is more than he allows for his entire bulk station and retail operation. It is known that a large part of this dealer business has been offered him at various times, the dealers being attracted by the large gallonage which they feel would be assured if they were permitted to handle the Sunny Service products.

The company, although it is constantly being offered desirable station sites at attractive terms, makes a careful study before building additional units. Naturally, based on his operations, Mr. Austin feels that there are too many distributing units.

"In other lines of retail business when volume decreases below a certain point the business is shut down," Mr. Austin said. "One grocery chain in Detroit has closed nearly 200 stores. But in the oil business if a station loses business the owner builds another station for the purpose apparently of keeping his total volume. The fact that so many companies have done this accounts for the duplication of facilities with the relatively low volume and high operating costs per unit."

Mr. Austin does not give concessions to commercial accounts. His attitude in regard to this is that there is no saving in the handling of this business which justifies lower prices quoted by many of the large and small distributors. He also sells for cash only, a policy which he agrees has cost him some business in times past but has not affected his profits. Bad accounts and extra expense incidental to carrying on credit accounts do not justify the additional cost in a business based on large volume at a minimum overhead. In regard to the latter the Sunny Service general offices and warehouse consists of a store building located several miles from the center of the city. With an office force of four persons he takes care of all the details of a business which is now receiving and distributing approximately 15 cars of gasoline daily with large motor oil volume.

Stresses Quality

In his advertising, Mr. Austin stresses the quality of his products as shown in the accompanying reproduction of a full page advertisement appearing in the Detroit newspapers. He has always featured the "Quicker Starting" and the "Swifter Pickup" of his gasoline. Although tests show that the specifications of his products have varied somewhat he usually sells gasoline with an initial well under 100° F. with a low 10 per cent point. His imported Zip has a 10 per cent point around 120, which he says gives the product the volatility required for quick start and rapid pickup.

Other specifications on Imported Zip include an endpoint well under 400° F. with a minimum gravity of 64. The gasoline has kept pace with the trend toward higher antiknock gasolines, the product belonging to the premium rating of 65 octane and above. The quality of the gasoline as well as the price is stressed in all advertising. The "Money-Back Guarantee" shown in the accompanying reproduction is a part of all advertising.

Free Advertising

Mr. Austin gives credit to his competitors for part of his success. A large scrap book filled with newspaper clippings sup-

Are you troubled with seepage water?

Have you a basement below sewer level . . . or an elevator sump, scale pit, piping tunnel, etc., that accumulates water by seepage, and drainage? Then you will be interested in the Penberthy Pumps pictured here.

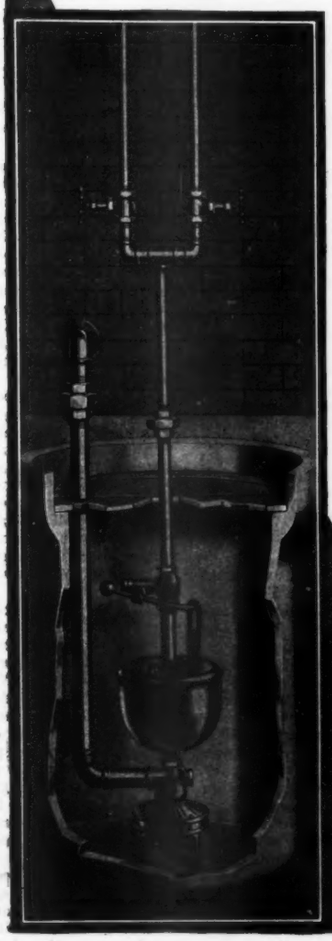
Penberthy Pumps will keep dry the places that cannot be drained directly into the sewer.

PENBERTHY PRODUCTS

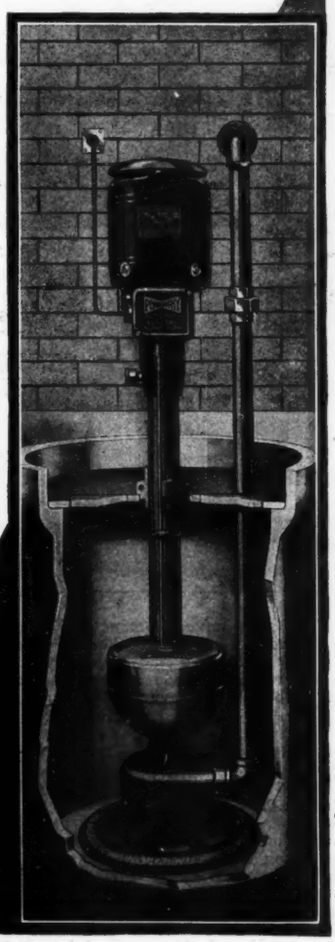
These pumps are completely automatic in operation; when installed . . . and installation is easy . . . they require no attention. They are ruggedly built of copper and bronze so that they are dependable and impervious to rust.

The Penberthy Pump shown at the left is operated by either steam or water pressure. When the steam pressure is down, the change to water operation is instantly made by simply closing one valve and opening another. The electrically operated unit is shown below at the right. The operating cost of both types is very small.

Penberthy Pumps are carried in stock by leading jobbers throughout the country. Write us for capacities, specifications and installation drawings . . or see your plumbing contractor.



PENBERTHY INJECTOR COMPANY



ported the statement of a local news clipping bureau that the Sunny Service company and its president ranked next to the Ford Motor Co. and Henry Ford in news publicity through the newspapers.

The scrap book told the story of a recent investigation carried on by the State of Michigan on the supposition that the company had not paid all the gasoline tax due to the state. News items reflecting on the integrity of the company's operations were climaxed with a report appearing in all newspapers to the effect that a final check had shown the company had not only paid all the tax due but had overpaid, and a check for more than $600 was being sent to the president to cover the overcharge. This and other publicity of a similar nature no doubt has served to place the company's operations in a favorable light with Detroit consumers.

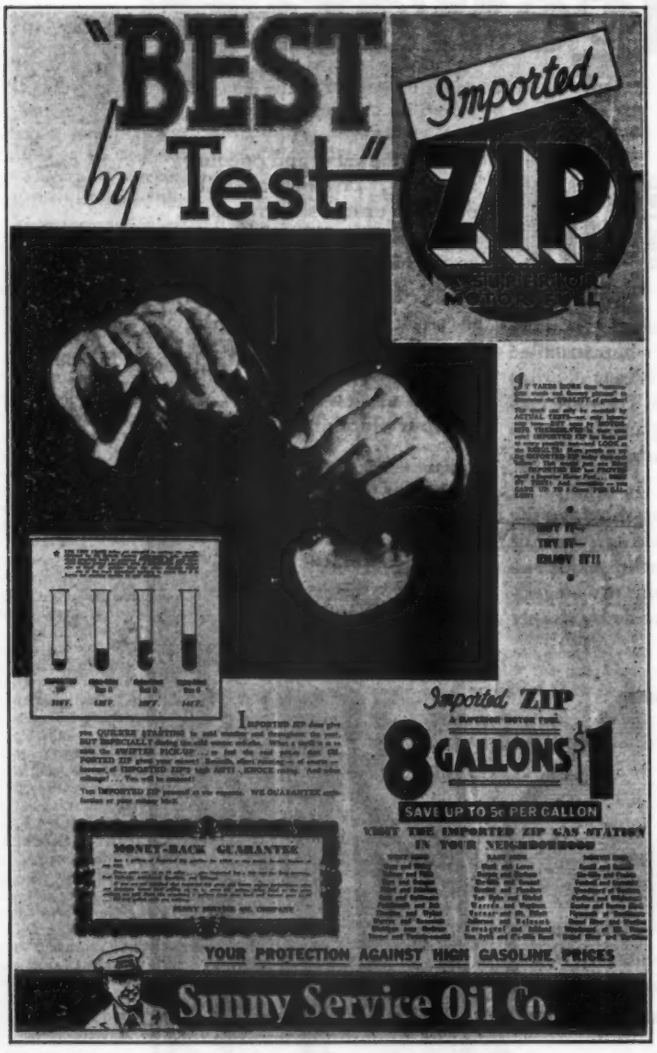
The company at present is spending $125,000 a year in Detroit newspapers and radio advertising. Mr. Austin gives this program major credit for the success of his merchandising plan. He points to the failure of the numerous tank-car and other types of cut price stations in Detroit and other parts of the Middle West as showing the necessity of having something to sell except price.

Mr. Austin expects to complete his contract with the Rumanian source of supply regardless of whether or not the present session of Congress passes an excise tax on gasoline. It is apparent that the imported gasoline has been received with favor by Detroit consumers, a development which is believed to be partially accounted for by the city's large foreign population. Efforts of competitors to stress the fact that their products were made from American crude, at American refineries by American labor was met with a full page advertisement to the effect that imported goods were commonly conceded to be superior to domestic products, pointing to silks from Japan, linens from Ireland, etc.

In regard to imports, Mr. Austin points out that if his operations were based entirely on price he would have dropped the Rumanian products for the domestic as there have been times during the past few months when he could have purchased domestic gasoline 2 cents per gallon under the delivered cost of the Rumanian product.

No announcement has been made as to the terms of the Rumanian contract. Figuring 3 cents to cover the cost of distribution, 3 cents for the Michigan state tax and 2.376 cents for freight between Detroit and Baltimore and the net back unloaded at Baltimore is 4.124 cents, which covers the Rumanian price plus the tanker charge from Rumania to Baltimore.

In the event that imported gasoline cannot be obtained in the future on a favorable basis, Mr. Austin expects to return to the distribution of domestic gasolines.



Reproduction of full page advertisement in Detroit newspapers featuring Rumanian gasolines. The "Money-Back Guarantee" and "Your Protection Against High Gasoline Prices" appears in all advertising. The test tubes show the relative temperatures at which 10 per cent of Zip and competitive gasolines are evaporated, supporting the claims for "quicker starting."

NEW GASOLINE AID TO SAFETY IN DIRIGIBLES AND AIRPLANES

The Lamp
Standard Oil Co. (New Jersey)

An elementary principle observed by seasoned airplane pilots in making a forced landing where a "crack-up" seems inevitable is to "cut" the ignition switch. With the spark off the danger of fuel in the gasoline tank catching fire in the event of damage to the ship is greatly minimized. While such catastrophes are happily isolated in the present state of commercial flying, the mental picture of a ship falling in flames is still strong among inexperienced air travelers, and even among some pilots.

Nor has the problem of the natural fire hazard of gasoline been confined to airplanes. The construction of the modern automobile and the position of the gasoline tank in the rear combine to minimize the motorist's worries on this score, but the owner of a motorboat or a launch is in a bad way in the event of accidental ignition of the contents of his fuel tank. Furthermore, with engines under closed hatches, as is so often the case, there is always the danger of escaping fumes forming explosive mixtures in the confined space, not to mention possible leakage of gasoline mingling with bilge water floating around under the floorboards—hardly a comfortable feeling for the boat owner.

Dirigibles

The problem particularly demanded study in the case of lighter-than-air craft. Noninflammable helium has largely replaced hydrogen as a lifting medium, but the Navy Department still felt that the presence of large quantities of gasoline aboard Uncle Sam's fighting dirigibles was inconsistent with the goal of safety they sought to reach.

Accordingly, the Naval Bureau of Aeronautics put the problem up to the aviation department of the Standard Oil Co. (New Jersey), which had already been working on a safety fuel. The result was a fuel which is practically free from the danger of accidental ignition under normal temperature conditions, at the same time being equal or superior to the best aviation gasoline in octane number and operating efficiency.

With the new safety fuel, the absentminded chap who holds a lighted cigarette in his mouth as he peers into his gasoline tank no longer automatically lays himself open to immediate and justifiable assault and battery, followed by a frantic leap for the fire extinguisher. In fact, even were the lighted "butt" to drop accidentally into the tank nothing would happen except that the cigarette would be extinguished. You can even toss lighted matches into the fuel with the same security that you would feel in dropping them in a barrel of water. If this seems incredible, here is the secret.

The Safety Line

More than half a century's experience with kerosene has shown that a flashpoint of 105° F. is the dividing line beyond which the danger of fire from leakage or spillage, or the formation of explosive mixtures where quantities of kerosene were stored, was negligible. Building regulations, fire insurance and transportation laws all over the world now recognize this principle. So a fuel with a 105° flashpoint would be as safe as kerosene in this respect.

Three main problems faced the aviation development engineers in finding a satisfactory safety fuel. First, there was the problem of starting, for 105° is considerably higher than the temperature at which the most volatile fractions of ordinary aviation gasoline will flash. Secondly, the fuel must be sufficiently volatile to vaporize completely prior to ignition. Thirdly, it was known that under existing methods the various fractions of motor fuels decreased in octane number, or knock rating, as the boiling point increased—in other words, the heavier ends tended to knock the most.

The starting problem is taken care of—at least in the case of aircraft—through adoption of the solid injection system, although the new fuel has been found to operate satisfactorily with ordinary carburetors in automobiles and motorboats if the engine is first warmed up. However, a number of motorboat engine manufacturers have already indicated their willingness to make any necessary modification in their carburetor and manifold designs to give the most efficient performance with the safety fuel.

Sufficient volatility in the new fuel was obtained by close fractionation, the lowest point being fixed by the 105° flashpoint and the highest by the volatility requirement, and the boiling points of the intermediate fractions being closely spaced.

The task of maintaining an octane number equal to the best antiknock gasolines virtually stumped research engineers until hydrogenation came along. Then it was found that octane numbers could be held constant or even raised as the boiling points of the various fractions increased, through a proper choice of charging stock and operating technique in the process.

It is expected that the new safety fuel will find a popular market in the aviation field, particularly in the operation of closed cabin passenger planes, as well as among owners of gasoline-driven launches and cabin cruisers, and of larger craft having gasoline auxiliaries.

TAXATION IN INDUSTRY MENACING SAYS J. H. PEW

The oil industry as a unit is now being operated more efficiently than at any previous time in its history, J. Howard Pew, president of Sun Oil Co., said in an interview with the Wall Street Journal.

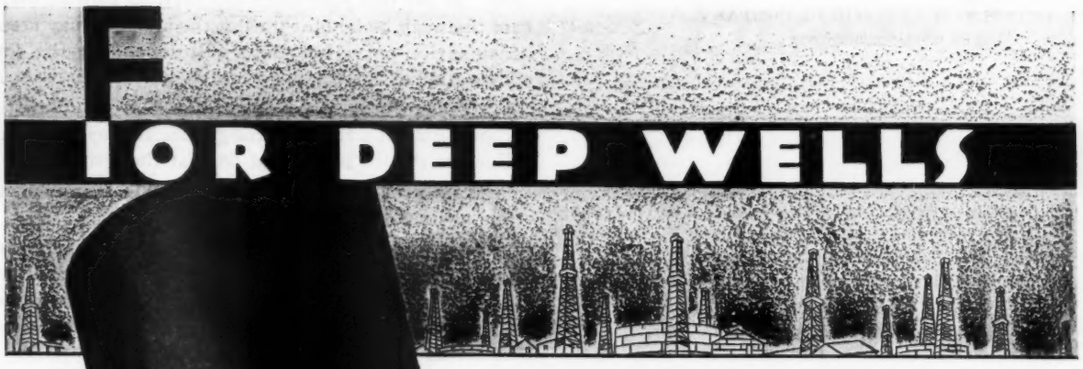
"This has been made possible," he said, "because it is one of the few industries whose volume of business has not been reduced. The products of petroleum are being produced and marketed at the lowest cost ever heretofore obtained. The petroleum industry is therefore in an advantageous position and should be among the first to share any improvement of conditions resulting from an upward trend in business.

"In my opinion the future of the industry depends more largely on the attitude assumed by both state and Federal Governments in regard to taxation than upon all other elements combined.

"But, according to the present, it is reported that the State of New Jersey would increase its gasoline tax to 5 cents per gallon. The taxes already assessed against the oil industry have gone beyond the point of maximum returns. Any further increases must necessarily result in bringing to the states a reduced revenue. State officials who advocate increases in gasoline taxes are either ignorant of the real facts or are desirous of turning the oil industry over to be operated by bootleggers and racketeers.

"If the State of New Jersey has the proper regard for the interests of its citizens and for some of its largest industries it could, by eliminating the exemptions on gasoline permitted under its present law, do much to prevent tax evasion and perform a great service to the oil industry; and at the same time produce a much greater revenue than is possible by the proposed increase in the gasoline tax.

"As to the proposed Federal tax, the petroleum industry is quite willing to bear its full share of taxation and is openly advocating the imposition of a manufacturer's tax as they believe it is the only form of tax so far suggested that will bring in sufficient revenue for the Government with a minimum of hardship to the sources from which the taxes are drawn. We believe this to be the only form of tax which will bring back that confidence necessary to insure better business conditions."



FOR DEEP WELLS

rely on this

SEAMLESS UPSET TUBING

As wells go deeper and conditions of service grow more severe, tubing is put to altogether new tests. Authentic records of performance are the best proof of fitness. And experience has removed all doubt of the capability of Seamless Upset Tubing to cope with the difficulties entailed by great depths, variable formations, crooked holes, and other adverse conditions.

The seamless walls and heavy upset ends of Seamless External Upset Tubing provide extra strength just where ordinary tubing is most vulnerable. There are no welds to open under strain and concentration of wear or under the cutting action of sucker rods. The thickened ends afford abundant wearing metal, force any bending away from the joints, and give increased resistance to the crushing action of the coupling—an important safeguard where tubing is to be made up and broken down again and again. The result is longer and more assured usefulness.

When running a long string or pumping a deep well, the experienced operator relies on NATIONAL A.P.I. External Upset Tubing—

America's Preferred Seamless Tubing

NATIONAL TUBE COMPANY

Subsidiary of United States Steel Corporation

PITTSBURGH, PA.

NATIONAL-SEAMLESS EXTERNAL UPSET TUBING

The OIL and GAS JOURNAL

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MEMBER AUDIT BUREAU OF CIRCULATIONS

NO TIME FOR ILLUSIONS

Reviews of the general business situation note that the oil industry is now in better shape than any, with the comment that it may lead the country out of the depression, a possibility first suggested in these columns.

It took courage to take a stand for better prices in a period of general decline but the oil business, having plunged to the bottom, knew there was no remedy there and that the only way out was up.

Action on that line gave the industry a needed tonic and put it in the condition where it is today recognized as fittest to lead to recovery.

But we have only started. If we are not to slip back we must look the facts squarely in the face.

Crude prices can be maintained only by attaining and maintaining corresponding gasoline prices, and there are several unfavorable factors to be considered.

First, the decline in consumption since the first of the year. Domestic consumption in January and February was 2.42 per cent less than in the corresponding months of 1931.

While, compared to other industries, this decline in gasoline consumption is but a drop in a bucket, and was plainly due, beside the slackening in general business, to an unfavorable spring season, it has meant a larger accumulation of stocks than might ordinarily have been expected.

This fact should be kept in mind in refinery programs, that we are starting the season with that handicap.

Another factor is the increase in imports in anticipation of a possible excise tax on foreign products. This increase is, of course, temporary, continuing probably until congress passes the revenue bill, but the natural rush to get imports under the wire will add that much more to our supply and correspondingly reduce the safe limit for domestic production.

These two considerations, added to the fact that gasoline stocks were too large as we entered the season, emphasize the urgent necessity of moderating refinery operations in line with this situation.

Gasoline stocks on April 23, this year, were 4,615,000 barrels above the estimated requirements of the American Petroleum Institute Committee on Economics for the end of April. They were 834,000 barrels more than gasoline stocks on the same date last year and everybody knows what happened to the market last summer.

Operating programs that might be considered safe in ordinary circumstances will be much too large for conditions like these and if that fact is disregarded distress or excess product is almost certain to break down the market and carry the crude market with it.

Motor vehicle registrations last year were 700,000 less than in 1930. So far this year there has been no sign of increase. The new cars that may be bought during the summer may steady the gasoline consumption curve but much will depend on the activity of trucks which are most affected by general conditions.

In other words, there is no basis for assuming that the demand for gasoline calls for an extra gallon, and operating programs at the refineries should be gauged on that thought.

Excess production at a time like this is industrial suicide and a crime against the whole industry.

Responsibility for market conditions this summer rests squarely upon the refiners, large and small. Overproduction and dumping are not a matter of size. Instances have been known where those who pointed the finger of scorn one year have had it pointed at themselves just as justly another year.

What is needed is what President Beaty of the American Petroleum Institute calls a "spirit of co-operation and sportsmanship", a sense of solidarity of interest and good faith in promoting it.

Such a spirit of "playing the game" has been evolved among the producers of crude to such an extent that when a program is set it is reasonably certain it will be carried out.

Unfortunately there has been no such assurance in the manufacturing end. Yet the oil producers were at one time just as hard to convince of the costly folly of overproduction and as certain they could never be got to agree or abide by a definite policy.

It is perhaps true that competition in the manufacturing end is more complex and intensified by conditions in the marketing division but the fundamental fact remains the same, that excess production forces down prices and sooner or later results in general loss all along the line.

Getting rid of surplus products at distress prices may get rid of excess stocks but it also gets rid of profits in the long run because of its effect on the general market.

Of all times the present is surely no time to risk adding to stocks or having to get rid of surplus by dumping it on the market. The situation is so simple that it seems absurd to have to state it.

Crude producers have demonstrated to their satisfaction that there is more money in less oil, yet supplying every demand at reasonable prices. It is just as true of gasoline. Keeping the supply in line with actual, not imaginary, demand means fair prices. Supplying more than the market can absorb means lower prices and less money.

All that is needed to put the manufacturing end on the same sound basis of operation is that "co-operation and sportsmanship" to which Judge Beaty referred.

It is not any more beyond the ability of the manufacturing division than it was beyond the ability of the producing division if they will get together and "play the game" fairly with one another.

There is such a thing as being too clever, too proud of shrewdness and sharp dealing that only overreaches itself and rebounds with disastrous consequences. As Judge Beaty sententiously remarked what does it profit a man if he lose the whole world and become a jackass?

Conditions today call for a common front, for united action for the general good.

Continuance of the recent crude advance depends on the ability of the refining and marketing branches to maintain corresponding prices for their products. Maintenance of gasoline prices depends on elimination of excess production and consequent dumping.

There would be no margin to spare, with stocks where they are, even if there was no decline in consumption and no increase in imports. With that decrease in consumption and those added imports the market situation is trembling in the balance.

On the other hand strict control of production will hold the market and pave the way for better returns.

This is no time for illusions.

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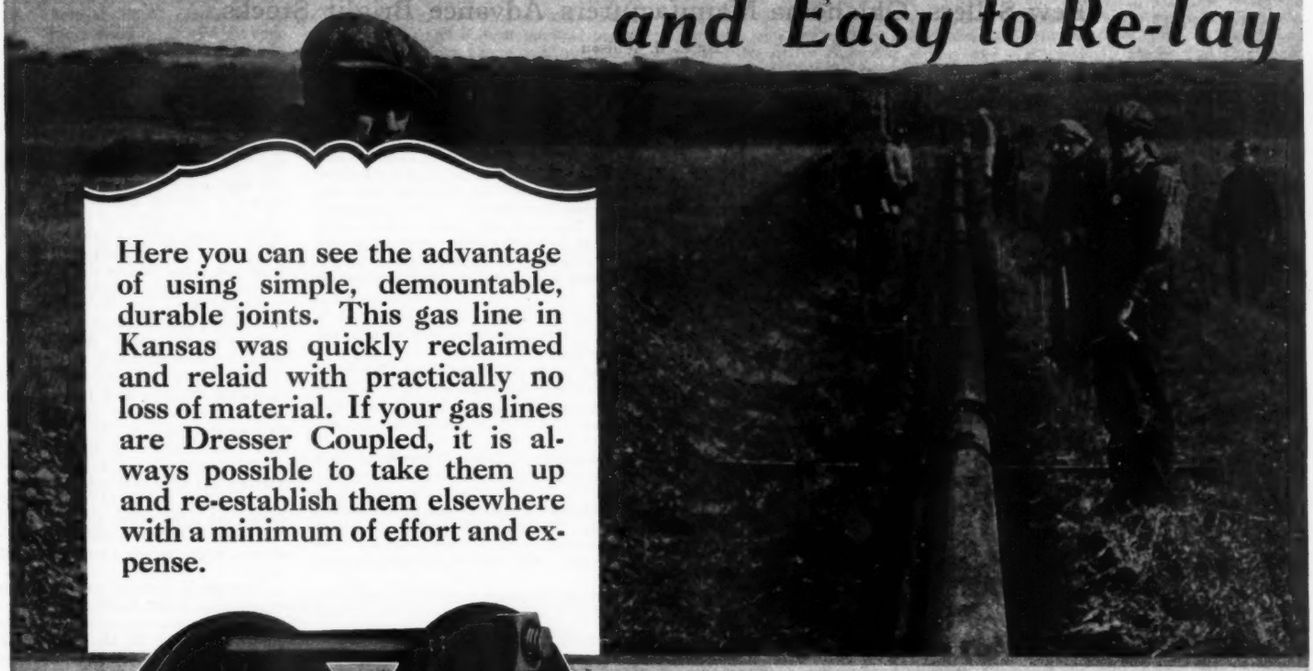

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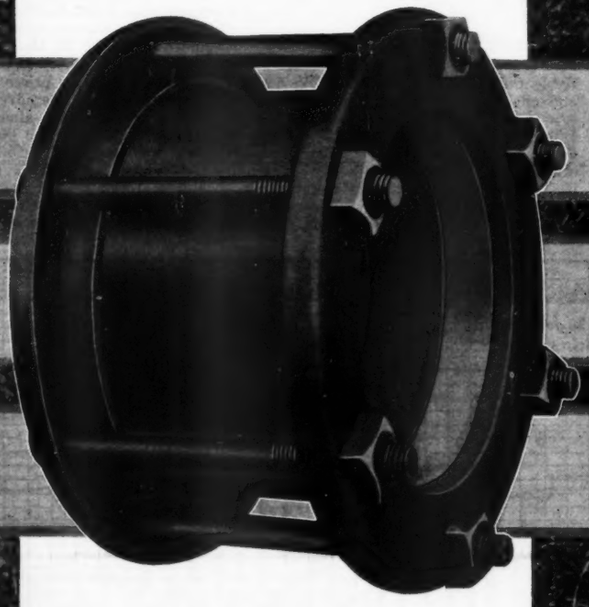

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Refinery Buying Aids Gasoline Market

Substantial Purchases Remove Distress Material Offered by a Few Sellers. Oklahoma Manufacturers Advance Bright Stocks

By C. O. Willson

The gasoline market in the Mid-Continent the first of the week, apparently had hurdled some obstacles in the form of distress motor fuel which made its appearance the latter part of last week. The material, practically all of which came from East Texas and North Texas refineries, threatened for a time to bring a reactionary trend throughout the Middle West and Mid-Continent. The situation was saved with inter-refinery buying which absorbed the bulk of the gasoline offered by refiners who required immediate relief. It was estimated the first of the week that the refinery buying totaled 400 cars some of which was for immediate shipment and the remainder over the early part of May. With this buying, gasoline prices in Oklahoma (Group 3) remained generally firm and it was hoped that this condition would continue over the first half of the month.

The remainder of the Oklahoma (Group 3) market, except for a 1-cent advance in bright stocks, was generally unchanged. The demand for kerosene continues steady with considerable new business already placed for the first half of May. Some reports indicated that the demand for furnace oils and tractor fuels was slower but there had been no general changes in prices. So far as Oklahoma is concerned fuel oils are firm except for an occasional sale of the extremely high cold test grades including gas oils. The few sales of the high cold test grades over the past week indicated weakness.

Natural Gasolines

The weak position of natural gasolines which has been explained in these columns from time to time over the past six months has not improved and at this time is being given more consideration than any other phase of the refined market by those who are looking forward to a satisfactory motor fuel market over the next six months. So far the natural market has failed to respond to the conditions which have made it possible to advance the refinery grades over the past two months.

The 26-70 grade of natural gasoline is freely offered in Oklahoma at 2⅛ cents and one-eighth cent less in Texas. The low of the 18-55 is three-eighths to one-half cent higher than 26-70 which is the most actively traded of all grades of natural gasolines. Prices on the more stabilized grades usually sold as motor fuels with vapor pressures as low as 8 pounds range up to 5 cents. Grades of from 9 to 11 pounds vapor pressure are being offered at a price range of 3¾ to 4¼ cents.

These stabilized grades are the bone of contention between the refinery and natural gasoline sales departments although the low price received for the regular grades of natural gasoline used as blending stock no doubt is of equal importance in the present relative price situation. The quantity of these stabilized natural gasolines now being sold in the Mid-Continent for local or northern shipment is variously estimated at from 50 to 75 cars daily. This leaves approximately 200 cars of the regular grades above 16 pounds vapor pressure, part of which is moving south to Gulf Coast refiners and export and coastwise shippers and the remainder is sold to Mid-Continent and Middle West refiners and jobbers. It is the failure of Gulf Coast outlets to take the bulk of the Mid-Continent natural gasoline output starting last year that caused the material to back up on the Mid-Continent refinery market with the result that it is now the most serious factor threatening the maintenance of the recent advances in refinery prices.

A stabilized natural gasoline under 11 pounds with a low distillation range from the initial to the endpoint is an effective competitor to U. S. Motor gasoline and higher gravity refinery gasolines especially when the refinery prices are from 1 to 1½ cents higher. The advent of the natural motor fuels has almost eliminated the spot demand for the high gravity refinery gasolines and refiners have lost many customers for their regular U. S. Motor material to the new competition. The motor fuels made at the natural gasoline plants, invariably have an octane rat-

REFINED MARKET BAROMETER

Scattered advances in cylinder stock prices featured week's changes in refined markets. The trend has been upward in these oils for several weeks, the price increases of the past few days including stocks in the Mid-Continent, Pennsylvania and East Coast. A number of manufacturers and compounders have also advanced their quotations on finished motor oils. The gasoline market for the most part was unchanged. Despite the low export prices on gasolines the domestic market continues firm at the higher levels established a week ago. The tank car market in kerosene as well as gasoline was aided by additional increases in tank wagon prices in several areas. Developments in fuel oils, gas oils and distillates were local, some areas reporting a better demand while other reports reflected a seasonal decline in consumption. Neutral oil and wax prices are unchanged.

Mid-Continent—Gasoline market steady first of week. Natural gasolines slow. Kerosene firm. Furnace oils less active. Heavy fuels and gas oils generally unchanged. Higher prices for bright stocks. Wax slow.

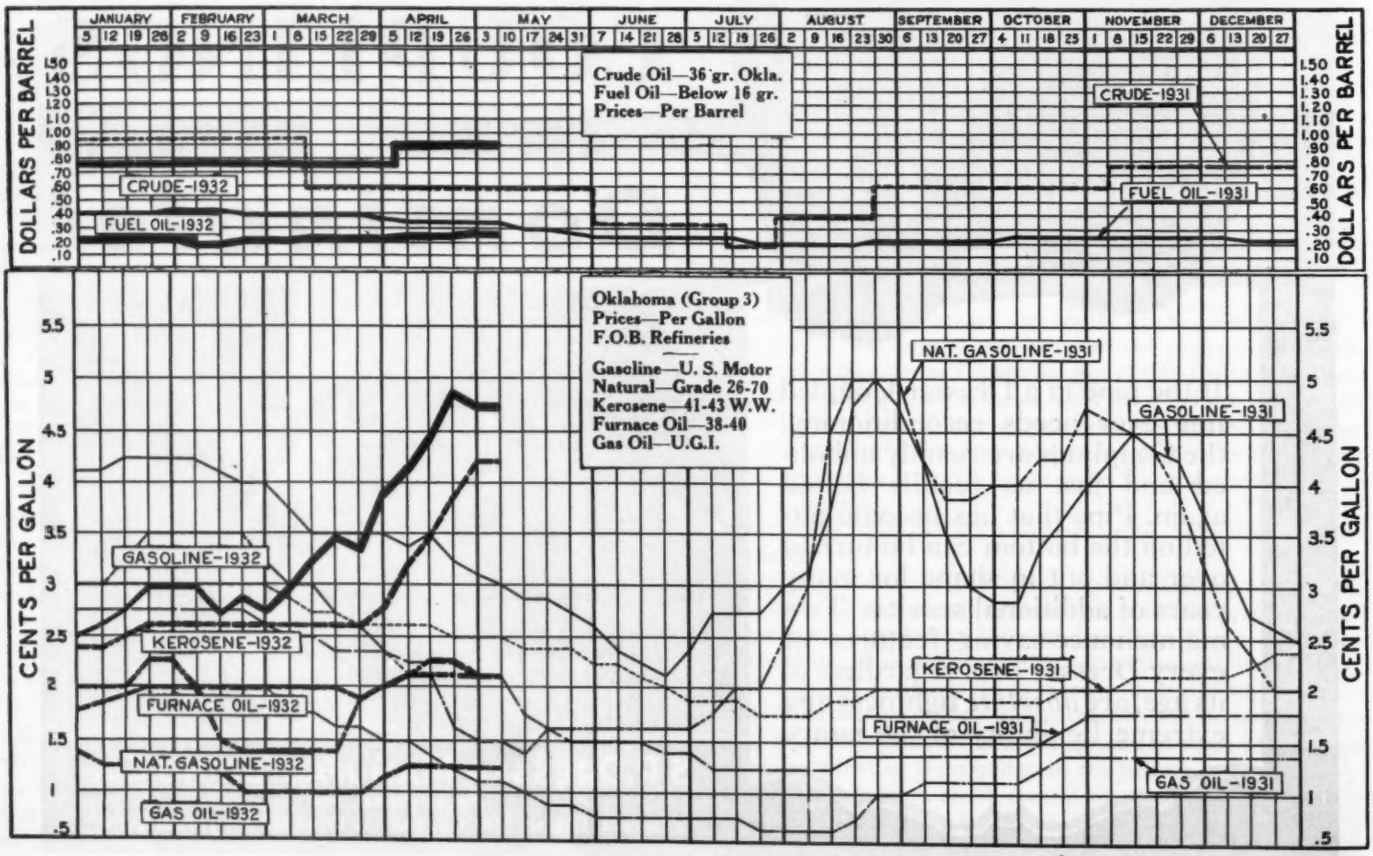
East Coast—Warm weather brings increase in gasoline consumption and improved tank car demand. Tank wagon prices on gasoline and kerosene advance in some states. Fair demand for kerosene. Stronger market for lubricants, particularly cylinder stocks. Possibility that expected import tax will not develop factor in fuel oil and gas oil market.

Chicago—Kerosenes advance following announcement of 1-cent increase in tank wagon schedules throughout Standard of Indiana territory. Gasolines and special naphthas firm. All fuels strong.

Pennsylvania—Steam refined stocks and bright stocks strong and prices higher on some grades. Gasoline and kerosene unchanged. Wax demand slow.

Gulf Coast—Most prices unchanged with slow movement. Export demand and prices for gasoline fail to show expected improvement. Some price shading in pale and red neutrals reported.

California—Market generally unsettled due to uncertainty regarding crude oil situation Good movement of gasoline.



ing above 60 and in many cases it is placed in the premium class with an octane number of 65 or better. In this connection, some jobbers who have specialized in the sale of the natural motor fuels have been able to build up a large business due to the antiknock, quick acceleration and easy starting properties.

The immediate problem is to bring the prices for these stabilized grades in line with the refinery market. Major oil companies are being urged to absorb the output of their natural gasoline plants through their own refineries and station outlets. The fact that some of these companies with refineries located in coastal areas not only ceased to be large buyers of the regular grades of natural gasoline but started offering their Mid-Continent production on the spot market has been largely responsible for the unsatisfactory price situation of the past several months. One of the large manufacturers which has been active in spot sales has definitely withdrawn its output from the market and will ship its stabilized output to its own stations and refineries. Two other large manufacturers are now shipping a part of their output to their refineries through their crude oil lines. It is estimated that a withdrawal of an additional 15 to 25 cars daily would quickly correct the inequitable price situation and bring a normal relationship between the two sources of motor fuel supply.

Gasoline and Naphtha

The spot market on the low octane U. S. Motor gasoline in shipments to the jobber trade on Monday and Tuesday was 4¾ to 5¼ cents. The Texas material previously mentioned was offered for resale the latter part of last week as low as 4⅜ cents, basis Oklahoma (Group 3). However in Oklahoma the price was not below 4⅝ cents and several sales were reported the first of this week at 4¾ and 5 cents.

Outside of a little low octane material coming from the Oklahoma City Field, the Oklahoma and Kansas market appears to be in excellent shape. A number of refiners have reduced their runs to the point where they will be required to buy from other refiners during May. In this connection more and more refiners are giving consideration to the savings in freight rates made possible by trading or buying from other refiners. Operators with stations or regular jobber customers located from two to several hundred miles from their refineries are able to save from one-fourth to a cent or more a gallon by getting their gasoline from a refinery with plants located a short distance from the destination points. With the narrow margins on which refineries and retail distribution are now operated the saving of a fraction of a cent a gallon often represents the difference between loss and profit.

The head of one refining company states that if a group of refiners with products of comparable specifications would make a study of this situation they could effect savings which would materially strengthen their earning position. He points out that some companies are absorbing from 1½ to 3 cents a gallon freight charge in their tank car market in shipments to their own stations and jobber customers. With a trading arrangement or an outright purchase from companies with refineries in other parts of the country this freight charge could be substantially reduced with benefit to all concerned. As one angle to this situation it is said that refiners who thought they were making a great sacrifice by curtailing their refinery operations and buying from other refiners in order to aid in balancing supply and demand for the entire territory, are actually reducing their overall costs due to the savings in freight charges.

There was fair demand for the middle octane U. S. Motor gasoline at a price range of 5¼ to 5½ cents. There is little complaint regarding low priced competition in the sale of this grade for the reason that the material coming from the low price sellers is generally under 57 octane. However, refiners do feel the competition of the superstabilized natural gasolines in the sale of middle and high octane grades.

Sellers are able to maintain at least a one-eighth cent premium for the 60-62, 400 endpoint grade over U. S. Motor gasoline. The 390, 375 and 350 endpoint grades are moving slowly at prices in line with those in effect a week ago.

Kerosene

The kerosene movement in Oklahoma is steady at a price range of 4¼ to 4½ cents for the 41-43 water white grade. Although the season of greatest consumption of kerosene is nearing an end there are no indications yet that the supply of specification material will prove excessive in the immediate future. A number of refiners do not make sufficient kerosene to cover their own requirements and so long as refinery operations are curtailed this condition will continue. Observers look for a return to a more normal price relationship to gasolines over the next few weeks but point to the strong statistical position of kerosene as proof that no rapid decline in prices is in prospect at this time.

Some sales of 32-36 straw, zero, under 190 flash furnace oil at 1⅞ cents was reported during the week. This represents a one-eighth cent decline from the previous week. Other grades of furnace oil are unchanged.

Fuel Oil and Gas Oil

The only weakness in the fuel oil and gas oil market reported during the week was in material having a cold test of 60 or higher. One refiner offered a 24-26 high cold test grade at 35 cents and some high cold test gas oil was sold at 47½ cents per barrel at Texas Panhandle plants.

Bright Stock Advance

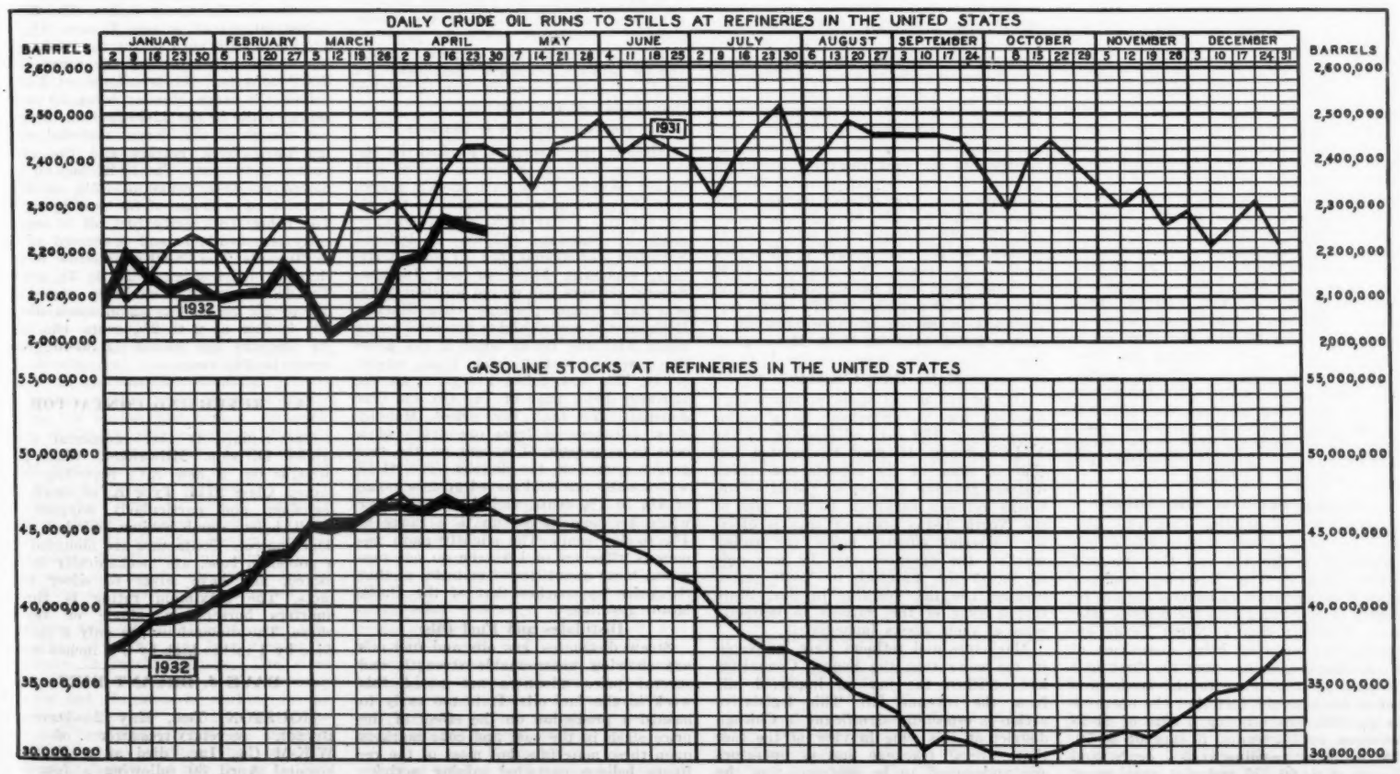
Most of the Oklahoma refiners have met the 1-cent advance in bright stock prices first announced last week. The new prices call for top quotation of 21 cents for the zero to 10, 150-160 grade, 20.5 cents for the medium cold test and 20 cents for the high cold test. The recent advances in Mid-Continent bright stock prices have been generally supported with little overlapping of competition reported from other areas.

AMERICAN PETROLEUM INSTITUTE WEEKLY REFINERY STATISTICS

The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to still, gasoline stocks and gas and fuel oil stocks in barrels—for the week ending April 30:

	Week ending April 30, 1932				Week ending April 23				Week ending April 25, 1931			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	443,400	7,367,000	5,743,000	100.0	461,100	7,291,000	5,585,000	100.0	483,200	8,907,000	7,730,000
Appalachian	91.8	108,700	1,819,000	1,137,000	91.8	100,700	1,772,000	1,071,000	93.8	88,600	1,824,000	1,227,000
Indiana, Illinois, Kentucky	98.9	310,200	6,515,000	4,031,000	98.9	312,300	6,705,000	4,184,000	97.5	328,200	6,125,000	3,505,000
Oklahoma, Kansas, Missouri	89.6	233,400	3,764,000	3,215,000	89.6	246,300	3,816,000	3,143,000	89.4	277,100	3,667,000	3,938,000
Texas	91.3	536,000	8,151,000	8,601,000	91.3	489,300	8,488,000	8,410,000	91.9	560,400	7,953,000	9,002,000
Louisiana and Arkansas	98.9	151,300	1,997,000	4,538,000	98.9	156,200	2,016,000	4,516,000	98.3	167,300	2,272,000	2,327,000
Rocky Mountain	89.4	45,300	2,021,000	622,000	89.4	47,300	2,014,000	635,000	93.1	51,000	1,874,000	812,000
California	86.7	452,400	14,769,000	96,024,000	96.7	445,400	15,183,000	96,802,000	98.8	477,100	13,829,000	98,860,000
Total United States	95.1	2,280,700	46,403,000	123,911,000	95.1	2,257,600	47,285,000	124,346,000	95.7	2,432,900	46,451,000	127,401,000
Texas Gulf Coast	99.8	436,600	6,596,000	5,819,000	99.8	386,300	6,898,000	5,563,000	100.0	419,300	6,820,000	6,546,000
Louisiana Gulf Coast	100.0	110,000	1,853,000	3,849,000	100.0	112,300	1,870,000	3,829,000	100.0	111,900	2,108,000	1,309,000

(1) Per cent refinery capacity represented. (2) Daily crude runs to stills. (3) Gasoline stocks. (4) gas and fuel oil stocks.



All data based on weekly reports of the American Petroleum Institute. Figures for last week not shown in graph but are included in above table.

Chicago Gasoline Tank Car Price Firm

Kerosenes Advance and Naphthas Unchanged. Blue Grade Prices May Be Normalized. Revived Interest in Blending

By Robert C. Conine
Chicago Bureau, The Oil and Gas Journal, 6 North Michigan Ave.

CHICAGO, May 2.—The gasoline tank car markets were still holding firmly Monday, while kerosenes advanced and naphthas remained unchanged in price and exhibited a better tone. Interest in blending has grown with the weakening in natural gasolines and the failure of adverse developments to disturb the gasoline tank car markets. One of the features of the week's news was the advance April 30, by Standard Oil Co. of Indiana of the kerosene tank wagon postings 1 cent throughout its territory with the exception of Michigan and Indiana. Indiana towns in the Chicago area took the advance. The Indiana company also boosted its 38-40 distillate 1 cent throughout the entire territory with the exception of the Chicago district. The effect of this advance in the heavier fuel upon other marketers operating from Chicago has been placed in doubt by the action of leading retail coal merchants in cutting the prices of coal and coke from 25 cents to $3.25 a ton, effective today. Several marketers complained that some of their customers were planning to revert to coal or coke. It became apparent Monday that the majority of marketers featuring heating oils intend to ignore the 1-cent advance of the Standard company.

May Normalize Blue Prices

A likely development of this week or next is thought to be the normalizing of the third grade gasoline markets throughout the territory. Indications from reliable sources point to this move. The normal position of the price competition gasoline is 1.5 cents below the posting of the regular grade at the service station. At at least 13 of the more important points in the territory the third grade gasoline price is from 1.9 to 5.7 cents below the price of the regular grade gasoline. These points and the amount below the regular grade price in effect on the third grade are: Chicago, 2.5 cents; Quincy, 3 cents; Des Moines, 5.7 cents; Sioux City, 5.3 cents; Minneapolis, 4.3 cents; Milwaukee, 4.7 cents; Grand Rapids, 2 cents; Saginaw, 1.9 cents; Kansas City, 3 cents; St. Louis, 4 cents; St. Joseph, 5.6 cents. At Detroit the regular grade gasoline is down to 12.5 cents, including a 3-cent state gasoline tax, and the third grade is 11.5 cents, a half cent above normal. It is expected that the situation in Detroit, where price cutting has been most intensive, will be relieved shortly. The third grade postings are below normal at numerous other points, especially in Kansas where the postings were raised to a minimum of 8 cents, exclusive of state tax, in more than 160 cities and towns late last month.

Gasoline Situation Still Critical

Although the gasoline tank car markets are holding well within the ranges published in The Oil and Gas Journal, jobbers are showing a strong tendency toward exaggeration of adverse factors reported to be coming into the district markets. A report that a North Texas operator was offering large quantities of U. S. Motor gasoline over the first half of May at 4⅝ cents to the trade was boiled down to the fact that the operator in question was offering 5 cars of 41-43 kerosene at 4⅛ cents, 5 cars of 68-70, 360 endpoint gasoline at 5⅛ cents, and 5 cars of 64-66 375 endpoint gasoline at 5 cents, over that period. The fact that several refiners who have not quoted in nearly a month are now asking for instructions on gasoline and distillates has been widely heralded. Another report which is making jobbers hesitant about ordering out material states that some of the smaller refiners have shipped considerable gasoline into the district consigned to themselves and are now hard put to place cars. Although the marketers were aware of these reports they have been apparently unable to turn the information into profit and to date this large quantity of "distress gasoline" remains a ghostly quantity unshackled by car numbers and other material considerations.

The oil trade is quite prepared by experience of last year to accept reports of distress material with little resistance or investigation, and for this reason the least substantiation of these rumors may have the effect of keeping the jobbers out of the markets until the bottoms of their tanks are nearly dry. The marketers report that most of the April gasoline was out of the way before the close of the month, leaving little activity at the close and indicating a good movement in spite of somewhat unfavorable weather conditions. The baseball games are a good index of motoring weather; two were called on account of cold weather and one was called on account of rain last week. The sun was shining over the week-end and the marketers look for May to mark the opening of the season of heavy gasoline consumption. Several major companies report considerable increases in the service station sales of the regular grade gasoline, with decreases in the third grade.

Motor Fuel Blending

The continued strength in the gasoline tank car markets and the softness found in the natural gasolines have revived interest in blending. One Chicago marketer is blending several grades of motor fuel, one of them a mixture of Michigan crude naphtha and 26 pounds vapor pressure natural of about 90 per cent recovery which can be made at a cost of 3.39 cents, Group 3, a gallon. This marketer pays 4¼ cents for 48-50 gravity naphtha of 135 initial and 430 endpoint. The natural gasolines used and prices are: 26 pounds, 93 per cent recovery, 75 octane number, 2⅛ cents; 22 pounds, 95 per cent recovery, 75 octane number, 2½ cents; 15-17 pounds, 95 per cent recovery, 75 octane number, 3½ cents, and 11 pounds, 98 per cent recovery, 65 octane number, 4⅝ cents. The cost of a 70-30 per cent blend with the 22-pound natural and the 48-50 naphtha is 3.72 cents, representing a saving of approximately 1 cent a gallon over the U. S. Motor gasoline.

Major Buys Gasoline

One of the bright spots in last week's markets was the purchase by a major company of 150 cars of gasoline in the Mid-Continent. It may be pointed out that in none of the reports concerning distress gasoline are any of the Mid-Continent refiners involved. In the case of the North Texas operator who is offering material slightly below the ruling markets the operator says he was able to obtain the materials at lower prices because the tax deadline in that State forced some of the refiners to liquidate some of their stocks immediately.

Marketers and refiners were interested in the news that the Senate Committee had stricken the tax on imported oils from the revenue bill. This legislative action is especially significant in Chicago district at this time in view of the fact that several trackage station operators are understood to be contemplating the importation of Rumanian gasoline. There have been hints that foreign distillates and gas oils also make their appearance in the district. However, the three tankers of heating oils which are to arrive in Chicago this month over the Lake route are said to be from the Detroit loading district.

Gasoline Tank Car Markets

The gasoline tank car gasoline markets are steady at last week's levels as follows: U. S. Motor, 4¾ to 5 cents, with most of the material showing in the lower part of the range; 60-62 400 endpoint gasoline, 5 to 5¼ cents; 64-66 375 endpoint gasoline, 5⅛ to 5⅜ cents; aviation, fighting grade, 5⅞ to 7½ cents; 68-70 360 endpoint, 5⅜ to 5⅝ cents. Here and there a car of U. S. Motor gasoline is reported bought at 4½ cents, but it is understood the transit material available early last week has been cleaned up. If the major companies move to normalize their third grade gasoline postings the position of the low octane material will be considerably strengthened in the tank car markets.

Naphtha Tank Car Markets

The naphtha tank car markets continue unchanged in price and somewhat better in tone. The schedule last week showed several adjustments to soft conditions in petroleum thinner and V.M.&P. naphtha. Prices Monday were as follows: Cleaners' naphtha, 6¾ cents; lacquer diluents, both grades, 8½ to 9 cents; rubber solvent, 6½ to 7½ cents; Stoddard solvent, 6 to 6¾ cents; petroleum thinner, 4¾ to 5½ cents; V.M.&P. naphtha, 5¼ to 6½ cents; petroleum spirits, 3⅞ to 5 cents. The petroleum thinner low represents a drop of three-eighths of a cent. Sellers report that conditions outside of Chicago district, including Detroit and Minneapolis, are much more favorable to the naphtha markets than in Chicago district. One major seller is offering the V.M.&P. naphtha and petroleum thinner at prices considerably below the quotations of competitors, while the prices of this major company on lacquer diluents, rubber solvent, cleaners' naphtha and Stoddard solvent are in line or higher than those of competitors.

Kerosene Tank Car Markets

Already the strongest product in the tank car markets, kerosene, moved still higher Monday from last week's ranges with its position more assured as the result of the 1-cent tank wagon advance made by Standard Oil Co. of Indiana Saturday throughout the 11-state territory, excepting Michigan and Indiana. Several refiners had moved up their kerosene tank wagon postings when Sinclair Refining Co. posted higher kerosene prices along with the 1-cent boost in the gasoline service station and tank wagon prices. The new prices are given on the Refinery Price page of The Oil and Gas Journal. The tank car prices Monday show advances of from one-eighth of a cent to a quarter of a cent on the two grades quoted in the district. The 41-43 water white material moved up to a range of 4⅛ to 4⅜ cents, and the 42-44 water white kerosene moved up to a range of 4⅜ to 4⅝ cents. The slightly more numerous offerings of kerosene do not represent large quantities of material so that the price approaches that of the U. S. Motor gasoline.

Distillates and Fuel Oils

Straw distillates, gas oils and fuel oils are showing unseasonable strength and several price advances are noted this week in the fuel oils. It is too early to hazard a prediction on the effect of the price slash in the coal and coke markets upon these materials, but most of the refiners believe curtailed mining activity due to strikes will force the retailers to advance their coal and coke prices shortly. Some marketers point out that the industrials who figure as buyers at this time of the year are operating at a low level of production, and in most cases are not likely oil prospects because of their extensive facilities for the use of coal. The domestic consumers in Chicago district are not affected by the Standard Oil Co. distillate advance throughout the rest of the territory, including Indiana and Michigan. The Standard of Indiana schedule to be effective July 1, prices f.o.b. Chicago, tank wagon are: No. 1, 36-38 gravity, 160°170° flash, 40 viscosity, 6 cents on quantities of 100 gallons or more; No. 2, 30-36 gravity, 175°-190° flash, 45 viscosity, 5½ cents on quantities of 150 gallons or more; No. 3, 16-20 gravity, 175°-210° flash, 50 viscosity, 4¾ cents on quantities of 400 gallons or more; No. 4, 12-16 gravity, 175°-250° flash, 105 viscosity, 4 cents on quantities of 400 gallons or more. On all of these grades the top of the contract price is 1½ cents above the spot market price. It is not known whether the 1½-cent spread will be maintained on No. 4, as competitors have established a 1-cent spread on this material in their contracts. There has been strong agitation among distillate and fuel oil marketers in Chicago district to leave the tops off the contracts, but so far competitive moves have muddled the situation and the spreads have dropped to 1 cent and then moved up to 1½ cents where they are none too secure.

Tank Car Prices

Four of the products listed in this section were quoted Monday at prices which reflect the reported scarcity of these materials in the territory. Whether the opening of the Lake navigation season will bring in a lot of outside distillates and fuel oils to bear down the prices remains to be seen. So far only one marketer is known to be bringing material into the district via the Great Lakes. The 32-36 industrial gas oil is now firm at 1¼ to 1⅜ cents with most of the material moving in the upper part of the range. The 28-30 zero fuel oil is offered at higher prices, the range Monday being 55 to 60 cents; while in the 22-26 fuel oil there is not enough of the 35-cent material moving to make a market and the price quoted is 40 cents. The 18-22 fuel oil has moved up to a range of 32½ to 37½ cents, from a range of 30 to 32½ cents. The below 18 gravity fuel oil is apparently less available and is offered at 25 to 30 cents. The 38-40 light straw is unchanged but stronger at 2¼ to 2½ cents. The 38-40 straw is similarly placed at 2⅛ to 2⅜ cents. The 32-36 straw distillate is firm at 2 to 2⅛ cents. One major company has moved its 36-40 grade straw to 2⅜ cents.

A.C. REVERSING CONTACTOR

The Square D Co., Industrial Controller Division, Milwaukee, Wis., has brought out a new A.C. reversing contactor, Class 8711, Type K, of small dimensions and particularly adapted to small hoist, dumb waiter, window and door control. Contactors are mounted on a porcelain base, are mechanically interlocked, and have silver to silver contacts. The maximum rating is three-quarters horsepower, single or three-phase. The dimensions are only 6 inches wide by 4 inches high by 3¼ inches deep.

DAVE J. BRYANT DIES

HOUSTON, Tex., May 2.—Dave J. Bryant, secretary-treasurer of the W-K-M Co., Inc., died at a Houston hospital April 30 following a four-day illness.

East Coast Gasoline Sales Increasing

Posted Prices Unchanged With Tank Car Shading at a Minimum. Change in Tariff Situation Affects Fuel Oil Outlook

By A. E. Mockler
New York Bureau, The Oil and Gas Journal, Suite 2803, No. 19 Rector Street

NEW YORK, May 2.—Balmy spring weather throughout the East Coast area during the past week was reflected in substantial increases in gallonage in the gasoline market, and movement was materially larger in both tank car and tank wagon markets. There were no changes in refiners' posted prices, and it was reported that price shading in the tank car market was at a minimum, reflecting the better consumption.

A half-cent kerosene tank wagon advance was announced by Standard of New York and other marketers effective April 30. Socony and other marketers also advanced tank wagon and service station gasoline one-half cent at Buffalo, Syracuse, Rochester and other up-state markets, effective May 1.

The Senate Committee is striking out the oil tariff feature of the House revenue bill brought about a complete change in the heavy oil outlook, although refiners were inclined to withhold comment until final disposition of the measure, believing there is a strong possibility sufficient pressure may be brought to bear to restore the oil import tax, or pass some substitute measure imposing a duty on oil imports. It is emphasized that independent producing interests which have been agitating for a tariff for the past few years were dissatisfied with the rates fixed in the House bill, and it is believed if no oil tariff is included in the revenue bill that a determined drive will be launched by senators from the oil states for an oil tariff of $1 per barrel, as originally proposed.

While the impression has been prevalent in some quarters of the trade that the recent price markups on bunker fuel were based largely on the expectation of higher costs on oil imports, refiners emphasize that these advances were made to adjust the bunker "C" oil market to advances in production costs already in effect through recent increases in domestic crude prices, and even elimination of any import tariff, it is believed, will not result in any lowering of bunker and Diesel oil prices to their former levels, which were the lowest in the recorded history of the industry here.

Furnace oil marketers have hailed the elimination of the oil tariff proposal from the revenue bill as a victory for their interests, and on the strength of this development have started booking domestic oil contracts for the 1932-33 heating season on the basis of prices ruling during the season just ending, although their contracts bear a proviso that in the event of imposition of an import tariff, the contract prices for furnace oil are subject to upward revision.

There has been an almost complete lack of foreign buying interest in the Gulf export market for several weeks, and volume has dropped off substantially from even last year's low totals. Russia and Rumania continue to undersell the United States Gulf in principal foreign markets, and considerable business, notably that of France, has been veering to Rumania in recent months. The close military and economic tieup between France and Rumania is working to the disadvantage of the American oil industry, and considerable crude oil business, which American producers had been expecting to handle, is now going to Rumania. As a result the placing of new French refineries in operation will not mean as much to American crude producers as has hitherto been indicated.

Refinery Gasoline

Posted prices remain unchanged at 6¼ cents for U. S. Motor, under 65 octane, and 6½ to 7 cents for 65 octane number and higher, both in tank car lots, f.o.b. refinery terminals. Posted quotations at other East Coast ports are likewise unchanged from the previous week's levels.

Refiners note a sharp increase in gallonage, with jobbers keeping their storage full and a fair amount of additional motor fuel "rolling" at all times. The warmer weather has accelerated the demand for the cheaper gasoline, under 65 octane number, with distributors utilizing this fuel for their "competitive price" product.

The general reopening of navigation has brought about more activity in the market for gasoline in barge lots, and considerable business was reported closed during the week. Prices for motor fuel in barge lots are half a cent under tank car levels, on the average.

Price cutting in tank car gasoline sales has diminished considerably during recent weeks, and refiners reported more uniformity in actual sales prices this week than for some time. There is a conservative tendency among leading interests to consider the present posted price basis as not yet fully established, and no further general increases are looked for in the immediate future unless the crude situation should show an unexpected and radical change for the better.

Gulf and California refiners continue to show extremely firm price views on gasoline in cargo lots, and competition from these sources presents no immediate cause for concern to refiners in the East Coast area.

Stocks of motor fuel held by East Coast refiners as of April 23 were 7,291,000 bbls., an increase over the 6,959,000 bbls., reported held at the close of the previous week.

Reported sales of gasoline in New York State during February, the latest month for which statistics are available, established a new high monthly record for the state, and marketers operating here believe their 1932 gallonage will run at record levels throughout the year.

With the summer motoring season just getting into real swing, marketers are devoting more thought to the "third grade gasoline" question. It has not yet been determined just how important a factor the third grade product will be in the East Coast markets this year, but leading marketers are apprehensive over the outlook, and fear the market may be flooded later on with gasoline from refineries which are unable to meet octane specifications in their regular sales channels.

A significant development in the retail situation this year is the almost total lack of activity on the part of major companies in the establishment of new retail filling stations. Convinced that station chains have reached and passed beyond the saturation point in sales effectiveness, it is believed the large marketers henceforth will be more inclined toward a policy of contraction of retail outlets, wherever it is found possible to take such a step without substantially endangering gallonage totals. With the crude production situation in hand, and the refining end in fairly favorable statistical position, it is indicated that marketing departments will come in for more attention than hitherto in the industry's campaign to restore all operations to a profitable and normal basis.

Kerosene

Spring demand for kerosene has brought out more activity in the tank car market, and a fair inquiry was reported this week, with stocks moving at 5¼ to 5½ cents for 41-43 water white, f.o.b. refineries. Movement of kerosene to distributing points via barge is becoming quite important in the New York harbor area, and while prices for barge lots are generally a matter of private terms, the average quotation in such transactions is roughly one-half cent under tank wagon levels.

Lubs

A stronger market has developed at the refineries, and this has been mirrored by an increase in spot quotations for cylinder oils. Spot 650 steam refined is currently quoted at 23 to 24 cents, up 1 cent from previous levels, with 600 flash 1 cent higher at 24 to 25 cents, and 630 flash a half cent up at 23½ to 24 cents. The market for 600 Warren E is also one-half cent higher at 23½ to 24 cents, with Oil City 600 E showing the same advance at 23 to 23½ cents. Bright stocks, light, are 1 cent higher at 30 to 31 cents, with the dark product recording a similar increase at 29 to 30 cents.

A slight improvement in demand for red and pale oils was reported, although movement is still along routine lines. Quotations for these oils were without change.

A multiplicity of "100 per cent pure Pennsylvania" lub oil brands on the local market is tending to undermine the price basis, and this type of oil is being sold in 2-gallon cans at as low as 89 cents, compared with previous prices of $1 to $1.25 per gallon. The competitive effect of these oils upon the standard brands of lubs is making itself felt in sales volume on the latter, it is said, although retail stations continue to post 30 to 35 cents per quart on a number of the leading brands.

Furnace Oil

Domestic heating oil marketers are booking contracts for the coming season on the basis of last season's prices, with the stipulation that quotations are subject to upward revision in the event of a tariff or sales tax on furnace oil. In local territory this makes the market for 1932-33 delivery 7¾ to 9 cents for 36-40 oil, 6½ cents for 32-36 oil, 6½ cents for 28-32 oil, and 5½ to 6 cents for 24-26 gravity oil.

Despite the mild winter, a number of marketers of furnace oil established new high sales records for the season, reflecting the great increase in the number of burner installations in this territory.

Bunker "C" Oil

The chief development was a further firming up in the bunker oil market at the Gulf where leading sellers were quoting 50 cents per barrel, an advance of 5 cents.

There were no changes in posted prices at principal East Coast ports, where refiners are posting 65 cents per barrel, in bulk, f.o.b. terminals. Reports from leading marketers indicate that gallonage during the first quarter of the year was just about equal that for the corresponding months of 1931, which, in view of current economic conditions, is an extremely favorable showing.

There was a slight gain in gas and fuel oil stocks at East Coast refineries during the week ended April 23, holdings on that date totaling 5,565,000 bbls., as compared with 5,432,000 bbls. at the close of the previous week.

Diesel Oil

Contract withdrawals of Diesel oil have shown further increases locally during recent weeks, and refiners report a satisfactory gallonage. The market remains unchanged at $1.30 in bulk at terminals.

A number of the new Diesel burners in the New York trade are running to South America and the Pacific Coast, and these boats frequently do part of their bunkering at Trinidad or Curacao or Aruba.

Gas Oil

With daylight saving in full swing there has been a further easing off in demand for gas oil from gas manufacturing companies in the East, but the market has remained unaffected, with refiners continuing to post 28 plus recycled oil at 4 cents with spot business being done at about 3¾ cents in tank car lots.

The eliminating of the oil tariff feature from the new tax bill has tended to remove much of the bullish sentiment which has been evident in gas oil markets here during recent weeks.

Gulf Export Market

There were no cargoes reported booked and no new inquiries developed. Prices were nominally unchanged on both gasoline and kerosene.

Only one change is reported in Rumanian export quotations, heavy gasoline being advanced 14 cents to $10.69 per ton. Prices for other Rumanian refined products, f.o.b. Constanza, remain at the levels quoted in this report in last week's issue of The Oil and Gas Journal.

Thus far nothing has been done toward reviving the export petroleum association, as recommended in the recent proposal for world market stabilization by J. B. Aug. Kessler, managing director of Royal Dutch Co. The corporate existence of the association has been continued, but there are no evidences of any pending resumption of activity on the part of the organization, which is made up of the principal major integrated companies in the United States.

Petroleum Exports

There was a general increase in export shipments reported during the week ended April 23, gains being recorded in all of the major products.

The following table shows refined petroleum exports from the port of New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	Apr. 23	Apr. 16	Apr. 9
Gasoline	55,000	15,000	45,000
Naphtha	320,000	7,000	60,000
Kerosene	25,000	7,000	15,000
Fuel and gas oil	68,000	15,000	25,000
Lubricating oil	898,000	654,000	975,000
Petroleum, ref'd.	385,000	230,000	235,000
	Pounds		
Petrolatum	13,000	.....	.....
Paraffin wax	2,050,000	2,490,000	1,370,000
Refined	.....	30,000	.....
Scale	70,000	100,000	.....
Lub. grease	945,000	730,000	550,000

Disturbed economic conditions abroad are having their effect in curtailing export demand for refined products, and this, together with the increasing competition from Russia and Rumania, is tending to put the local export market on a hand-to-mouth basis. In addition to the growing competition from Russian and Rumanian refiners, a number of countries formerly entirely dependent upon outside sources for their refined petroleum requirements are now starting to build up home refining facilities, and thus are in position to supply domestic requirements formerly taken care of by purchases in the American market.

Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended April 23 totaled 3,334,000 bbls., a daily average of 476,285 bbls., compared with 1,979,000 bbls., a daily average of 282,714 bbls. for the week ended April 16, and a daily average of

(Continued on Page 52)

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINES

	May 3		Apr. 26	
OKLAHOMA (Group 3)—				
*U. S. Motor	.04¾	.05	.04¾	.05¼
60-62 400	.04⅞	.05¼	.04⅞	.05¼
64-66 390	.05	.05¼	.05	.05⅜
64-66 375	.05	.05¼	.05¼	.05½
68-70 350	.05¼		.05¼	
NORTH TEXAS—				
*U. S. Motor	.04⅝	.04¾	.04⅝	.05
60-62 400	.04⅞	.05	.04¾	.05¼
64-66 390	.04⅞	.05¼	.04⅞	.05¼
64-66 375	.05	.05¼	.05	.05¼
64-66 360	.05¼		.05¼	
†**NORTH LOUISIANA—**				
*U. S. Motor	.05¼		.05¼	
60-62 400	.05¼	.05⅜	.05¼	.05⅜
†**ARKANSAS—**				
*U. S. Motor	.05¼		.05¼	
CHICAGO Based on Okla. (Group 3)—				
*U. S. Motor	.04¾	.05	.04¾	.05
60-62 400	.05	.05¼	.05	.05¼
64-66 375	.05⅛	.05⅜	.05⅛	.05⅜
Aviation fighting grade	.05⅞	.07½	.05⅞	.07½
68-70 360	.05⅜	.05⅝	.05⅜	.05⅝

Octane Ratings—Above quotations cover price ranges on gasoline in which no octane rating is given. Week of May 3, in the case of the U. S. Motor and 60-62 400 endpoint grades where an octane rating of 57-65, inclusive, is guaranteed, prices are three-eighths cent per gallon higher than quotations shown in above tables; where an octane rating of better than 65 is guaranteed, the prices are three-fourths cent higher. In the case of the remaining grades, gasolines of 65 octane rating or higher are quoted one-half cent higher than the quotations shown in above tables.

Unless otherwise provided by agreement of buyers and sellers, the Series 30 testing equipment of the Ethyl Gasoline Corp. is recognized as standard in determining octane ratings.

*Present distillation specifications on U. S. Motor gasoline are: 10 per cent evaporated, 167° F. maximum; 50 per cent, 284° F. maximum; 90 per cent, 392° F. maximum; residue not exceeding 2 per cent; maximum vapor pressure, 12 pounds. Additional specification on U. S. Motor gasoline available from bulletins of Bureau of Mines, Washington, D. C.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.06	.06¼	.06	.06¼
60-62 400	.06¼	.06⅜	.06¼	.06⅜
64-66 375	.06⅜	.06⅝	.06⅜	.06⅝
68-70 350	.06⅝	.06¾	.06⅝	.06¾

Octane Ratings—In the case of U. S. Motor and 60-62 400 endpoint grades, same price differentials based on octane ratings as shown in above tables for Oklahoma and other Mid-Continent areas.

CALIFORNIA (domestic movement only)—				
54-58 U. S. Motor	.05¾	.06¼	.05¾	.06¼
58-60 400	.06½	.07	.06½	.07
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.06¼		.06¼	
Boston	.07		.07	
Baltimore, Md.	.06½		.06½	
Charleston, S. C.	.06¼		.06¼	
U. S. Motor, 65 octane and above:				
New York (Bayonne)	.06½	.07	.06½	.07
Boston	.07¼		.07¼	
Baltimore, Md.	.06½	.07	.06½	.07
Charleston, S. C.	.06½	.07	.06½	.07
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.05¼	.05½	.05¼	.05½
U. S. Motor, below 65 octane number	.05	.05¼	.05	.05¼

NAPHTHAS

OKLAHOMA (Group 3)—	May 3		Apr. 26	
50-52 450 (blending)	.04¾	.05	.04¾	.05
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.05⅛	.05¼	.05	.05⅛
ARKANSAS—				
48-50 450 (blending)	.04¾	.05	.04¾	.05
CHICAGO Based on Okla. (Group 3)—				
50-52 450 (blending)	.04½	.04¾	.04½	.04¾
Cleaners' naphtha, 56-58 gr. 200 i.b.p.-320 e.p.	.06¾		.06¾	
Lacquer diluent, 180 i.b.p.-250 e.p.	.08½	.09	.08½	.09
Lacquer diluent, 140 i.b.p.-200 e.p.	.08½	.09	.08½	.09
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06½	.07½	.06½	.07½
Stoddard solvent, 300 i.b.p.-410 e.p., over 100° flash	.06	.06¾	.06	.06¾
Pet. thinner, 290, 300 i.b.p.-415 e.p., over 83° flash	.04¾	.05½	.04¾	.05½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.05¼	.05½	.05¼	.05½
Petroleum spirits	.04¼	.05	.04¼	.05

NATURAL GASOLINES

OKLAHOMA (Group 3)—	May 3		Apr. 26	
Grade 18-55	.02⅝	.02⅞	.02⅝	.03
Grade 26-70	.02⅛		.02⅛	
Grade 30-70	.02		.02	
NORTH TEXAS—				
Grade 18-55	.02½	.02¾	.02⅝	.02¾
Grade 26-70	.02		.02	
Grade 30-70	.01⅞		.01⅞	
NORTH LOUISIANA—				
Grade 26-70	.02½		.02½	
CALIFORNIA—				
57-78 375	.04½	.05	.04½	.05

Note—Grades 18-55, 26-70 and 30-70 are three of 24 grades adopted by the Natural Gasoline Association of America effective January 1. The grades are based on pounds vapor pressure and amount evaporated at 140° F. See Page 74 of January 7 issue for explanation of new grading system. While not exactly the same specifications apply, Grade 18-55 corresponds to the former Grade A, Grade 26-70 to former Grade AA and Grade 30-70 to former Grade BB.

KEROSENES

(All kerosenes water white)

	May 3		Apr. 26	
OKLAHOMA (Group 3)—				
41-43	.04¼	.04½	.04¼	.04½
42-44	.04⅝	.04½	.04½	.04¾
NORTH TEXAS—				
40-41	.04	.04¼	.04	.04¼
41-43	.04¼	.04⅝	.04¼	.04⅝
†**NORTH LOUISIANA—**				
41-43	.04½		.04½	
42-44	.04¾		.04¾	
†**ARKANSAS—**				
41-43	.04½		.04½	
PENNSYLVANIA (inland refineries)—				
45	.04⅝	.04⅞	.04⅜	.04⅝
46	.04¾	.05	.04½	.04¾
47	.04⅞	.05⅛	.04⅝	.04⅞
CHICAGO (Based on Group 3)—				
41-43	.04⅛	.04⅜	.04	.04¼
42-44	.04⅜	.04⅝	.04⅛	.04⅜
***CALIFORNIA—**				
38-40 high burning test	.04	.04½	.04	.04½
NEW YORK (Bayonne, N. J.)—				
41-43	.04¼	.04½	.04¼	.04½
GULF COAST (domestic)—				
41-43 water white	.04¼	.04½	.04¼	.04½

*For Pacific Coast consumption.
†For Arkansas, Louisiana and Mississippi delivery.

TRACTOR FUELS*

	May 3		Apr. 26	
OKLAHOMA (Group 3)—				
39-40 prime white	.02½	.02¾	.02½	.02¾
38-40 light straw	.02¼	.02⅜	.02⅜	.02⅝
NORTH TEXAS—				
38-40 light straw	.02¼	.02½	.02⅜	.02⅝
CHICAGO (Based on Group 3)—				
38-40 light straw	.02¼	.02½	.02¼	.02½
PENNSYLVANIA (inland refineries)—				
41-43 prime white	.04	.04¼	.04	.04¼

*There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 575° F. endpoint and less than .2 per cent sulphur. Tractor fuels are available from all Mid-Continent refining groups at prices in line with the Oklahoma market taking into consideration differentials in freight rates.

FURNACE OILS*

	May 3		Apr. 26	
OKLAHOMA (Group 3)—				
32-36 straw	.01⅞	.02	.02	.02⅛
36-38 straw	.02	.02¼	.02	.02¼
38-40 straw	.02⅛	.02¼	.02⅛	.02¼
29-41 prime white	.02⅜	.02½	.02⅜	.02½
NORTH TEXAS—				
38-40 straw	.02⅛	.02¼	.02⅛	.02½
†**NORTH LOUISIANA—**				
36-40	.02½	.02⅝	.02½	.02⅝
†**ARKANSAS—**				
32-36	.02½	.02⅝	.02½	.02⅝
CHICAGO (Based on Group 3)—				
32-36 straw	.02	.02⅛	.02	.02⅛
38-40 straw	.02⅛	.02⅜	.02⅛	.02⅜
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03¾	.04	.03¾	.04
NEW YORK (Bayonne, N. J.)—				
32-36	.04		.04	
36-40	.05		.05	

*Above prices are for furnace oils of zero cold test, under 190° F. flash and good odor.
†For Arkansas, Louisiana and Mississippi delivery.

GAS OIL, DIESEL OIL AND FUEL OIL

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

	May 3		Apr. 26	
OKLAHOMA (Group 3)—				
32-36 (G.O.) cracking stock	.01⅜	.01½	.01⅜	.01½
U.G.I. (G.O.)	.01⅜		.01⅜	
32-36, zero to 15 (G.O.) high flash	.01½	.01⅝	.01⅝	.01¾
28-30, zero to 10	.52½	.55	.52½	.55
26-30, zero to 10	.47½	.52½	.47½	.52½
24-26	.40	.45	.40	.45
20-22	.35	.40	.35	.40
16-20	.30	.35	.30	.35
Below 16	.27½	.32½	.27½	.32½
NORTH TEXAS—				
32-36 (G.O.) industrial	.01¼	.01½	.01¼	.01½
22-26	.40	.45	.40	.45
Below 20	.27½	.35	.27½	.35
†**NORTH LOUISIANA—**				
32-36 (G.O.) zero	.02¼	.02½	.02¼	.02½
14-16	.35	.45	.35	.45
†**ARKANSAS—**				
32-36 (G.O.) zero	.02¼	.02½	.02¼	.02½
14-16	.35	.45	.35	.45
CHICAGO (Based on Group 3)—				
32-36 (G.O.) industrial	.01¼	.01⅜	.01¼	.01⅜
28-30 (zero)	.55	.60	.55	.57½
22-26	.40		.35	.40
18-22	.32½	.37½	.30	.32½
Below 18	.25	.30	.25	.27½
PENNSYLVANIA (inland refineries)—				
36-40	.03¼	.03½	.03⅛	.03⅜

Note—Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

CALIFORNIA—				
30-34 (G.O.) per bbl.	.75	.95	.75	.95
27 plus Diesel	.75	.90	.75	.90
15-19 Bunker (at tidewater)	.55	.75	.55	.75
15-19 Bunker (cargo lots)	.50	.65	.50	.65
15-19 (tank cars)	.45	.70	.45	.70
GULF COAST—				
28-30 (G.O.)	.03	.03⅛	.03	.03⅛
28-30 Diesel	1.20		1.20	
Bunker C (bulk cargoes)	.45	.50	.45	.50
Bunker C (bunkers)	.55		.55	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.04	
*28-30 Diesel	1.30		1.30	
†Bunker C	.65		.65	

*Lighterage 6½ cents per barrel.
†Lighterage 5 cents per barrel.

PETROLEUM COKE*

Prices per ton f.o.b. refineries in Chicago area.

	May 3		Apr. 26	
Breeze (screenings)	3.75		3.75	
Still runs	4.75		4.75	
Lump and egg	7.00	7.50	7.00	7.50

*Refiners will absorb freight up to 80 cents a ton.

NEUTRAL OILS

(Viscosity at 100° F. and Color)

	May 3		Apr. 26	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.06¼	.06½	.06¼	.06½
180-3	.07½	.07¾	.07½	.07¾
180-4	.07	.07¼	.07	.07¼
200-3	.08½		.08½	
200-4	.08	.08¼	.08	.08¼
240-3	.09¾	.10	.09¾	.10
240-4	.09¼	.09½	.09¼	.09½
280-3	.11¼	.11½	.11¼	.11½
280-4	.10¼	.10½	.10¼	.10½
300-3.5	.11¾	.12	.11¾	.12
350-3.5	.12¼	.12½	.12¼	.12½
400-4	.12¾	.13	.12¾	.13
500-4.5	.13¼	.13½	.13¼	.13½
100-2 Paraffin Oil	.04¼	.04½	.04¼	.04½
15-30 Cold Test:				
200-3	.07¾	.08	.07¾	.08
200-4	.07½	.07¾	.07½	.07¾
240-3	.09¼	.09½	.09¼	.09½
240-4	.08¾	.09	.08¾	.09
280-3	.10¾	.11	.10¾	.11
280-4	.09¾	.10	.09¾	.10
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.15	.16	.15	.16
10 pour test	.14	.15	.14	.15
15 pour test	.13½	.14½	.13½	.14½
25 pour test	.12¾	.13¼	.12¾	.13¾
30 pour test	.12¾	.13	.12¾	.13
180 vis., No. 3, 25 pour test	.15¾	.16½	.15¾	.16½
200 vis., No. 3:				
Zero pour test	.22	.23½	.22	.23½
10 pour test	.21	.22	.21	.22
15 pour test	.19½	.20	.19½	.20
25 pour test	.18	.18½	.18	.18½
30 pour test	.17¾	.18	.17¾	.18
GULF COAST—				
Pale Oils:				
100-2-2½	.05		.05	
200-3	.06½		.06½	
300-3	.07		.07	
500-3½	.08	.08½	.08	.08½
750-3½	.09	.09½	.09	.09½
1,200-3½	.10½	.11	.10½	.11
2,000-4	.12	.12½	.12	.12½
Red Oils:				
200-5-6	.05	.05½	.05	.05½
300-5-6	.05½	.06	.05½	.06
500-5-6	.06¾	.07	.06¾	.07
1,200-5-6	.09½	.10	.09½	.10
2,000-6 plus	.11	.11½	.11	11½

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

CALIFORNIA—

Pale Oils:				
100-21/2-3	.07¾	.08	.07¾	.08
200-21/2-3	.07¾	.08	.07¾	.08
300-3-31/2	.08¼	.08½	.08¼	.08½
350-3-4	.08¾	.09	.08¾	.09
400-3-4	.09¼	.09¾	.09¼	.09¾
530-3-4	.09¾	.10	.09¾	.10
550-3-4	.10¼	.11	.10¼	.11
Red Oils:				
200-41/2-5	.07¾	.08¼	.07¾	.08¼
300-5-6	.08¼	.08¾	.08¼	.08¾
350-5-6	.09	.09¼	.09	.09¼
400-5-6	.09½	.09¾	.09½	.09¾
450-5-6	.10	.10¼	.10	.11
500-5-6	.10½	.11	.10½	.11
600-5-61/2	.11½	.12	.11½	.12
700-61/2 plus	.12½	.12¾	.12½	.12¾
750-61/2 plus	.13	.13½	.13	.13½
800-61/2 plus	.14½	.14¾	.14½	.14¾

NEW YORK (Bayonne, N. J.)—

Paraffin Oil:				
25 pale	.10¼		.10¼	
28 pale	.07¼		.07¼	
280 red	.12½		.12½	
250 red	.11½		.11½	
225 red	.10		.10	
200 red	.09¼		.09¼	

BRIGHT STOCKS AND STEAM REFINED STOCKS

OKLAHOMA (Group 3)—	May 3		Apr. 26	
600 light green S.R.	.05	.06	.05	.06
600 dark green S.R.	.04	.04½	.04	.04½
Bright Stock:				
190-200 D	.23		.22	
150-160 D, 0-10	.20¾	.21	.19¾	.20
150-160 D, 10-25	.20¼	.20½	.19¼	.19½
150-160 D, 25-40	.19¾	.20	.18¾	.19
150-160 E	.20		.18¾	.19
PENNSYLVANIA—				
600 S.R.	.13	.13½	.12½	.13
650 S.R.	.15½	.16	.15½	.16
600 Pennsylvania flash	.16½	.17	.16½	.17
600 D filtered	.22	.22½	.21½	.22
600 E filtered	.16½	.17	.15½	.16
Pennsylvania Grade bright stock:				
Bright Stock, No. 8 color, 145-50 vis., 210-540-550 flash:				
10 pour test	.26	.27	.26	.27
15 pour test	.24		.23½	.24
25 pour test	.23		.22½	.23
35 pour test	.22½	.23	.22	.22½

WAX AND PETROLATUM

(Prices per pound)

OKLAHOMA (Group 3)—	May 3		Apr. 26	
124-126 white crude scale	.01¾	.02	.01¾	.02
PENNSYLVANIA—				
122-124	.02⅛	.02¼	.02⅛	.02¼
124-126	.02⅛	.02¼	.02⅛	.02¼
NEW YORK (Bayonne, N. J.)—				
Refined Wax:				
120-122	.02¾		.02¾	
125-127	.03⅛		.03⅛	
130-132	.03⅜		.03⅜	
133-135	.04		.04	
135-137	.04⅛		.04⅛	
Petrolatum in barrels in carload lots:				
Dark Green	.01¾		.01¾	
Amber	.02⅛		.02⅛	
Extra amber	.02⅝		.02⅝	
Cream	.04⅝		.04⅝	
Lily white	.05⅝		.05⅝	
Snow white	.06⅝		.06⅝	

EXPORT PRICES

GASOLINE

GULF COAST—	May 3		Apr. 26	
U. S. Motor	.05	.05¼	.05	.05¼
60-62 400	.05	.05½	.05	.05½
61-63 390	.05½	.05⅝	.05½	.05⅝
64-66 375	.05½	.05¾	.05½	.05¾
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55 437 e.p.	.04	.04½	.04	.04½
U. S. Motor, 65 octane num.	.05		.05	
U. S. Motor, 67 octane num.	.05¼		.05¼	
U. S. Motor, 69 octane num.	.05½		.05½	
58-62 400 endpoint gasoline	.04½	.05	.04½	.05

KEROSENE

GULF COAST—				
43-43 prime white	.04¼		.04¼	
41 water white	.04⅜	.04½	.04⅜	.04½
LOS ANGELES, CALIF.—				
41-43 water white	.04	.04¾	.04	.04¾

LUBRICANTS

NEW YORK (Bayonne, N. J.)—				
600, steam refined cylinder stocks, in bbls.	.21	.22	.21	.22
650, steam refined	.22	.23	.22	.23
600, Pennsylvania flash	.23	.24	.23	.24
630, Pennsylvania flash	.29½		.29½	
600, Warren E	.23	.24	.23	.24
600, Oil City E	.22½	.23	.22½	.23
Light 140-150 Bright Stocks	.29		.29	
Dark 140-150 Bright Stocks	.28	.29	.28	.29

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

East Texas (Apr. 1, 1932)† ..... $ .98
East Texas (April 11, 1932)‡ ..... .98
Corsicana heavy* ..... .64
Other fields ..... See gravity table

†Posted by Magnolia Petroleum Co., Sinclair Refining Co., Panola Pipe Line Co., Tidal Refining Co. and The Texas Company. ‡Gulf Pipe Line Co. and Atlas Pipe Line Co. *Magnolia Petroleum Co.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective April 25, 1932)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) (Mar. 14, 1932) $2.02
Pennsylvania Grade Oil in Southwest Pennsylvania Lines 1.75
Penna Grade Oil in Eureka Pipe Line Lines (West Virginia) (Feb. 26, 1932) 1.70
Penna Grade Oil in Buckeye Pipe Line Lines (Mar. 12, 1932) 1.55
Corning Grade Oil in Buckeye Pipe Line Co.'s line (April 26, 1932) 1.05
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931) ... .60

Pennzoil Co.
(Effective April 25, 1932)

Pennsylvania Grade Oil in National Transit Lines:
Group A $1.97
Includes Cochran, Franklin, Hamilton and Doolittle districts.
Group B 1.96
Includes Tituaville district.
Group C 1.95
Includes Turkey and Tidiout districts.
Group D 1.94
Includes Bear Creek and Porkey districts.
Group E 1.92
Includes Eidenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jamesa, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts.
Price depends on length of pipe line haul to plant at Oil City.

Tide Water Pipe Co.
(Effective April 25, 1932)

Bradford, Pa. $2.02
Allegany, N. Y. 2.02

Pure Oil Co.
(Effective April 25, 1932)

Cabin Creek, W. Va. $1.70
Bradford Hollow, W. Va. 1.70
Kelly's Creek, W. Va. 1.70

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties ..... See gravity table

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.

Ilse, light (Aug. 24, 1931) ..... $ .75
Ilse, heavy (Aug. 24, 1931) ..... .53
Fort Collins (April 11, 1932) ..... .86
Florence (April 11, 1932) ..... .80
Wellington (April 11, 1932) ..... .76
Greasewood Dome, Colo. (Apr. 11, 1932) 1.00
Dutton Creek (April 11, 1932) ..... .82
Rock Creek, Wyo. (April 11, 1932) 1.00
Frannie, light (Nov. 3, 1931) ..... .61
Frannie, heavy (Nov. 3, 1931) ..... .51
Salt Creek ..... Mid-Continent gravity table
LaBarge ..... Mid-Continent gravity scale
Big Muddy (April 11, 1932) ..... .98
Grass Creek (April 11, 1932) 1.20
Elk Basin (April 11, 1932) 1.20
Lance Creek (April 11, 1932) 1.15
Poison Spider (Mar. 5, 1931) ..... .70
Notches (Mar. 14, 1927) ..... .65
Hudson (June 2, 1931) ..... .65
Lander (Mar. 5, 1931) ..... .40
Rex Lake (Feb. 22, 1930) 1.10
Osage (Apr. 15, 1931) ..... .98
Lost Soldier (April 12, 1932) ..... .80
Hamilton Dome (Nov. 3, 1931) ..... .45
Greybull (April 11, 1932) 1.20
Cat Creek (April 11, 1932) 1.20
Pondera (Nov. 3, 1931) ..... .90
Sunburst, Mont. (April 11, 1932) 1.05
Hogback, N. Mex. (Aug. 24, 1931) .... .80
Border, Mont. 1.55
Red Coulee, Alberta 1.55
Lea County, N. Mex. (Apr. 1, 1932)* .. .65
Maljamar (April 11, 1932) ..... .60
Artesia-Jackson (April 11, 1932) ..... .65

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback and Iles by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro Oil & Refining Co.

*Posted by The Texas Company, Humble Oil & Refining Co. met this price effective April 11.

WEST TEXAS

Iatan and Westbrook..Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos Counties* ..... $ .65
Lea County, N. Mex. (See Rocky Mountain States).
Toborg, Pecos County (April 11, 1932)† .55

*Effective April 1, 1932, Magnolia Petroleum Co., The Texas Company. Effective April 11, Humble Oil & Refining Co. and Gulf Pipe Line Co. and Stanolind Oil & Gas Co. in Winkler County. †Shell Petroleum Corp.

GULF COAST

Grade A and Grade B classifications discontinued by leading buyers.....
.....See gravity table
Jennings, La. (April 11, 1932)* ..... $ .75
Lockport, La...See Gulf Coast gravity table
Refugio, light ..... See gravity table
Refugio, heavy (April 11, 1932)‡ ..... .80
Markham (April 11, 1932)§ .....
.....See Gulf Coast gravity schedule
High Island (April 11, 1932)¶ .....
.....See Gulf Coast gravity schedule

*Gulf Refining Co. †Magnolia Petroleum Co. ‡Humble Oil & Refining Co. §The Texas Company. ¶Yount Lee Pipe Line Co.

NORTH LOUISIANA AND ARKANSAS

Smackover, Ark. (all grades) ..... $ .65
Urania, La. (April 12, 1932) ..... .60
East El Dorado, Ark. (April 6, 1932) .. .65
Stephens, Ark., below 29° (April 12, 1932) ..... .61
Stephens, Ark., 29° and above (April 12, 1932) ..... .64
Other fields ..... See gravity table

Note—Smackover, all grades, The Texas Company, April 1, 1932; Magnolia Petroleum Co., April 6, 1932; Standard Oil Co. of Louisiana, April 6, 1932; Standard Oil Co. of Louisiana, April 11, 1932.

(Continued on Next Page)

CRUDE OIL GRAVITY TABLE

	Kansas and Oklahoma	North and Central Texas	East Central Texas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Salt Creek and LaBarge, Wyoming	North Louisiana and Arkansas	Gulf Coast (Texas-Louisiana)	Cameron Meadows, Louisiana	Iowa and Lockport, Louisiana
	1	2	3	4	5	6	7	8	9	10
Below 25 degrees	....	....	$.67	....	....	....	$.68	$.80	$.70	$.80
25-25.9 degrees	....	....	.67	....	....	....	.70	.81	.71	.81
26-26.9 degrees	....	....	.67	....	....	....	.72	.82	.72	.82
27-27.9 degrees	....	....	.67	....	....	....	.74	.83	.73	.83
28-28.9 degrees	....	....	.76	....	....	....	.76	.84	.74	.84
Below 29 degrees	$.76	$.76	....	....	....	$.76	....	....	....	....
29-29.9 degrees	.78	.78	.78	....	....	.78	.78	.85	.75	.85
30-30.9 degrees	.80	.80	.80	....	....	.80	.80	.86	.76	.86
31-31.9 degrees	.82	.82	.82	....	....	.82	.82	.87	.77	.87
32-32.9 degrees	.84	.84	.84	....	....	.84	.84	.88	.78	.88
33-33.9 degrees	.86	.86	.86	....	....	.86	.86	.89	.79	.89
34-34.9 degrees	.88	.88	.88	$.76	$.66	.88	.88	.90	.80	.90
35-35.9 degrees	.90	.90	.90	.78	.68	.90	.90	.91	.81	.91
36-36.9 degrees	.92	.92	.92	.80	.70	.92	.92	.92	.82	.92
37-37.9 degrees	.94	.94	.94	.82	.72	.94	.94	.94	.84	.94
38-38.9 degrees	.96	.96	.96	.84	.74	.94	.96	.96	.86	.96
39-39.9 degrees	.98	.98	.98	.86	.76	.94	.98	.98	.88	.98
40 degrees and over	1.00	1.00	1.00	.88	.78	.94	1.00	1.00	.90	1.00

Note—Magnolia Petroleum Co.'s prices in Oklahoma, North Texas and Central Texas, effective April 1, are the same as above given in Columns 1 and 2, excepting that the schedule begins with below 28 degrees, 67 cents; 28-28.9 degrees, 76 cents. The Empire Pipe Line Co. met the Magnolia prices in Kansas and Oklahoma; the White Eagle Oil Corp. in Kansas and the Pure Oil Co., in Oklahoma.

Column 1—Effective April 1, 1932, Continental Oil Co. in Oklahoma and Kansas; Barnsdall Refineries, Inc., and Standish Oil Co. (Phillips Petroleum Co.), in Oklahoma and Kansas; Skelly Oil Co., Kanotex Refining Co., Derby Oil Co., Vickers Petroleum Co., in Kansas; Magnolia Petroleum Co. and Pure Oil Co., in Oklahoma (see note above); White Eagle Oil Corp., in Kansas (see note above); The Texas Company in Oklahoma. Effective April 11, 1932, Stanolind Crude Oil Purchasing Co. in Oklahoma and Kansas; Gypsy Oil Co., Mid-Continent Petroleum Corp., Champlin Refining Co., Eason Oil Co., Pepper Gasoline Co. and Carter Oil Co. in Oklahoma. Carter Oil Co.'s schedule begins at below 25 degrees, 68 cents, with 2 cents added for each degree upward.

Column 2—Continental Oil Co., effective April 1, in North Texas only; followed on same day by The Texas Company in North and Central Texas; Magnolia Petroleum Co. in North and Central Texas (see note above); effective April 11, the Humble Oil & Refining Co., Gulf Pipe Line Co. and Stanolind Crude Oil Purchasing Co.

Column 3—Effective April 1, 1932, the Magnolia Petroleum Co.; effective April 11, 1932, Humble Oil & Refining Co.

Column 4—Effective April 1, 1932, Magnolia Petroleum Co.; effective April 2, the Philtex Oil Co. (Phillips Petroleum Co.), but its schedule was carried down to below 30 degrees at 66 cents, with 2 cents added for each degree upward. Effective April 11, other companies met Continental schedule.

Column 5—Effective April 1, 1932, Magnolia Petroleum Co.; effective April 2, Philtex Oil Co., excepting that latter company carried its schedule down to below 30 degrees at 56 cents, with 2 cents added for each degree upward. Effective April 11, Continental Oil Co. and Gulf Pipe Line Co. met Magnolia Petroleum Co. prices.

Column 6—Midwest Refining Co., effective April 11, 1932.

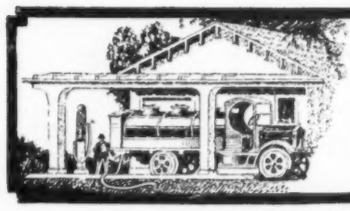
Column 7—The Texas Company, effective April 1, 1932; Magnolia Petroleum Co., effective April 6, 1932; Standard Oil Co. of Louisiana, Louisiana Oil Refining Co., Stanolind Oil & Gas Co. (in Pine Island and Pleasant Hill and in Marion County, Texas) and Gulf Refining Co., effective April 11, 1932.

Column 8—The Texas Company, effective April 1, 1932; Sun Oil Co., April 1, 1932; Humble Oil & Refining Co., effective April 11, 1932; Gulf Pipe Line Co., effective April 11, 1932. Gulf's gravity scale ends with a top of 35 and above at 91 cents.

Column 9—Magnolia Petroleum Co., effective April 6, 1932.

Column 10—Magnolia Petroleum Co., effective April 6, 1932.

(California Crude Oil Prices on Page 39)



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns May 3.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Chicago	16.0	16.0	3.0	10.0
Decatur, Ill.	16.5	16.5	3.0	10.1
E. St. Louis	15.8	15.8	3.0	9.3
Joliet	16.5	16.5	3.0	10.1
Peoria	16.5	16.5	3.0	10.1
Quincy	16.3	15.2	3.0	9.9
Davenport, Ia.	16.6	16.6	3.0	10.4
Des Moines	16.6	16.6	3.0	10.4
Keokuk	16.6	16.6	3.0	10.4
Sioux City	16.2	16.2	3.0	10.0
Duluth, Minn.	17.6	17.6	3.0	11.0
Mankato	17.2	17.2	3.0	10.8
Minneapolis	17.3	17.3	3.0	11.0
LaCross, Wis.	18.3	18.3	4.0	11.1
Milwaukee	17.2	17.2	4.0	10.0
Madison	17.4	17.4	4.0	10.2
Detroit, Mich.	12.5	12.5	3.0	10.0
Grand Rapids	15.8	15.8	3.0	10.5
Saginaw	14.2	14.2	3.0	10.8
Evansville, Ind.	17.3	17.3	4.0	10.1
Indianapolis	17.3	17.3	4.0	10.1
South Bend	17.8	17.8	4.0	10.6
Fargo, N. D.	19.0	19.0	3.0	13.0
Huron, S. D.	18.4	18.4	4.0	11.8
Sioux Falls	17.9	17.9	4.0	11.5
K. C., Mo.	16.0	16.0	3.0	8.7
Springfield*	16.0	16.0	3.0	9.6
St. Louis*	15.5	15.5	3.0	9.4
St. Joseph	15.6	15.6	3.0	9.2
Wichita, Kans.	14.9	14.9	3.0	8.9
Bartlesville, Ok.	14.1	16.1	4.0	8.1

*State tax 2 cents, remainder city tax.

A third grade of gasoline, "Stanolind Blue," is sold at all major points at a price 1½ cents or more below the price on the regular grade.

Effective November 4 — New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. on 500 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Dallas, Tex.	17.0	18.0	4.0	10.0
Fort Worth	17.0	18.0	4.0	9.0
Houston	14.0	17.0	4.0	10.0
San Antonio	16.0	18.0	4.0	9.0
El Paso	15.0	17.0	4.0	12.0
Texarkana	*18.5	18.5	4.0	†11.0
Muskogee, Ok.	15.0	17.0	4.0	9.0
Okla. City	15.0	17.0	4.0	9.0
Tulsa	15.0	17.0	4.0	9.0
Ft. Smith, Ark.	*18.0	18.0	6.0	†11.0
Little Rock	*19.0	19.0	6.0	†11.0

One-cent rebate made from posted station prices to cash purchasers in Louisiana, Arkansas and Tennessee.

*Less 2½ cents to dealers. †Less 2 cents to dealers.

PENNSYLVANIA-DELAWARE AND PART OF NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Pittsburgh, Pa.	16.0	17.0	3.0	11.0
Philadelphia	15.0	16.0	3.0	11.0
Scranton	16.0	17.0	3.0	11.0
Allentown	16.0	17.0	3.0	11.0
Altoona	16.0	17.0	3.0	11.0
Erie	16.0	17.0	3.0	11.0
Dover, Del.	16.0	17.0	3.0	11.0
Wilmington	16.0	17.0	3.0	11.0
Springf'd, Mass.	16.5	17.5	3.0	8.5
Worcester	16.3	17.3	3.0	8.5
Boston	15.5	16.5	3.0	8.5
Providence, R.I.	14.5	15.5	2.0	8.5
Hartford, Conn.	15.5	16.5	2.0	8.5
New Haven	15.6	16.6	2.0	8.5

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Ohio points	17.5	18.0	4.0	*12.0

Dealers and commercial accounts 2 cents under tank wagon.

*Service station price 13 cents.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Denver, Colo.	16.0	19.0	4.0	13.5
Pueblo	16.0	19.0	4.0	13.0
Grand Jctn.	20.0	23.0	4.0	15.5
Casper, Wyo.	16.0	19.0	4.0	11.0
Cheyenne	15.0	18.0	4.0	12.5
Butte, Mont.	19.0	22.0	5.0	17.0
Billings	19.0	22.0	5.0	15.5
Great Falls	21.0	24.0	5.0	17.0
Helena	21.0	24.0	5.0	17.0
Salt Lake, Utah	18.5	21.5	4.0	16.0
Albu'que, N. M.	15.0	18.0	6.0	14.0
Boise, Idaho	†18.0	20.0	5.0	18.0
Twin Falls	19.0	22.0	5.0	18.0

*Two-cent discount off tank wagon to dealers.

†One-cent discount to dealers at time of delivery.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Atlanta, Ga.*	21.5	21.5	6.0	9.5
Augusta	21.5	21.5	6.0	14.5
Macon	21.5	21.5	6.0	12.5
Savannah	22.0	22.0	6.0	13.5
Birm'ham, Ala.	21.5	21.5	6.0	13.0
Mobile	23.0	23.0	6.0	11.0
Montgomery	23.0	23.0	6.0	14.5
Jackson, Miss.	19.5	19.5	5.0	11.5
Vicksburg	19.5	19.5	5.0	9.5
Jack'ville, Fla.	18.5	18.5	7.0	10.5
Miami	21.5	21.5	7.0	13.5
Pensacola	21.5	19.5	7.0	13.5
Tampa	20.5	20.5	7.0	9.5
Lexington, Ky.	18.5	19.5	5.0	10.5
Covington	18.5	19.5	5.0	10.5
Louisville	17.5	18.5	5.0	10.5
Paducah	18.5	19.5	5.0	8.5

A third grade "Kyso Green" is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. To Pensacola, Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax and 2½ cents county tax.

Effective April 2 price to dealers 2 cents under posted tank wagon price.

*An additional discount of 1 cent is offered to dealers effective October 6.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Atl'tic City, N.J.	16 7	17.2	3.0	11.5
Newark	15.7	16.2	3.0	8.5
Annapolis, Md.	17.2	17.7	4.0	10.0
Baltimore	16 4	16.9	4.0	7.0
Cumberland	18.2	18.7	4.0	12.0
Wash'g'n, D. C.	14.9	15.4	2.0	10.0
Danville, Va.	19.0	19.5	5.0	11.8
Norfolk	17.5	18.0	5.0	10.3
Petersburg	18.5	19.0	5.0	11.3
Richmond	18.0	18.5	5.0	10.7
Roanoke	19.2	19.7	5.0	12.0
Charles'n, W.Va.	17.7	18.2	4.0	11.5
Parkersburg	16 4	16.9	4.0	10.2
Wheeling	17.6	18.1	4.0	11.4
Charlotte, N. C.	20.5	21.0	6.0	10.7
Hickory	20.8	21.3	6.0	12.6
Mt. Airy	20.7	21.2	6.0	12.5
Raleigh	20 4	20.9	6.0	12.2
Salisbury	20.7	21.2	6.0	12.5
Charleston, S.C.	18.5	19.0	6.0	10.3
Columbia	20 4	20.9	6.0	12.2
Spartanburg	20.7	21.2	6.0	12.5

Two and one-half cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and States of Maryland and New Jersey, where discount is 3½ cents.

Prices shown above are for standard gasoline.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	10 7	6.23
V.M.P. naphtha	12.7	7.23
Cleaners' naphtha	15.2	9.23
Stanisol	15.2	9.23

Tank wagon prices f.o.b. Chicago January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Albany, N. Y.	15 5	16 5	3.0	10.0
New York*	14 0	16 0	3.0	9.5
Buffalo	16.5	17.5	3.0	9.0
Rochester	16.5	17.5	3.0	9.0
Syracuse	17.3	18 3	3.0	9.5
Boston, Mass.	15 0	16 0	3.0	9.0
Augusta, Me.	17 3	18.3	4.0	9.5
Manch'tr, N. H.	16.9	17 9	4.0	9.0
Burlington, Vt.	17.8	18.8	4 0	10.0

*Prices in steel barrels.

PACIFIC COAST TERRITORY

Standard Oil Co. of California*

	Gasoline			Kero.
	Tank truck	Posted retail	Incl'ds tax	tank of wagon
Fresno	12.5	14.5	3.0	17.0
San Francisco	12.5	14.5	3.0	15.5
Los Angeles	12.0	14.0	3.0	15.5
Reno, Nev.	16.0	20.0	4.0	19.0
Portland, Ore.	14.0	12 0	4.0	16.5
Seattle, Wash.	14.0	13.0	5.0	16.5
Tacoma	14.0	12.0	5.0	16.5
Spokane	18.5	20.0	5.0	20.5
Phoenix, Ariz.	14.5	17.0	5.0	20.0

Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

*Retail prices posted by Standard Stations, Inc., a subsidiary.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
N. Orleans, La.	19.0	19.0	6.0	†12.0
Baton Rouge	18.0	18.0	5.0	†12.0
Alexandria	19.0	19.0	6.0	10.0
Lafayette*	19.0	19.0	6.0	†10.0
Lake Charles*	19.0	19.0	6.0	†12.0
Shreveport	17.5	17.5	5.0	†12.0
Knoxville, Tenn.	22.5	22.5	7.0	13.5
Memphis	20.5	20.5	7.0	9.0
Chattanooga	22.0	22.0	7.0	11.0
Nashville	21.5	21.5	7.0	12.5
Bristol	21.0	21.0	7.0	14.0
Lt. Rock, Ark.	19.0	19.0	6.0	11.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

†Kerosene prices in Louisiana include 1 cent tax except New Orleans where tax is 2 cents.

Two-cent discount off gasoline and kerosene tank wagon price to dealer and commercial accounts.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Omaha	15 9	16 9	4.0	10.25
McCook	17.0	17.0	4.0	11.75
Norfolk	17.75	18 75	4.0	10 75
N. Platte	18.0	18.0	4.0	11.5
Scottsbluff	17.0	17.0	4.0	11.25

Note — Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

STANOLIND FURNACE OIL IN CHICAGO

Effective July 1, prices f.o.b. Chicago, tank wagon prices: 1 to 99 gallons, 8 cents; 100 gallons or more, 6 cents.

Stanolex Fuel

Effective May 9, f.o.b. Chicago, tank wagon prices: 1 to 199 gallons, 7 cents; 200 gallons or more, 5 cents. Sinclair met this by bringing down the price of its No. 3.

Fuel Oils

Chicago tank wagon prices (in lots of 400 gallons and over): 38-40 straw distillate, 6 cents; 32-36 gas oil (light zero), 5.5 cents; 32-36 gas oil (industrial), 5.25 cents; 28-30 zero fuel oil, 5 cents; 24-26 fuel oil, 4.25 cents; 18-22 fuel oil, 3.75 cents.

TANK WAGON CHANGES

Standard Oil Co. of Kentucky effective April 20 reduced kerosene tank wagon price at Tampa, Fla., to 9½ cents and advanced gasoline tank wagon and service station prices at the same point to 20.5 cents. Effective April 28, the company advanced kerosene tank wagon and gasoline tank wagon and service station prices at most points in Kentucky, Mississippi and Alabama one-half cent. Gasoline tank wagon and service station prices at Savannah, Ga., advanced one-half cent on April 28.

Standard Oil Co. of New York effective May 2 advanced gasoline tank wagon, and service station prices one-half cent at Buffalo, Syracuse, Rochester and Jamestown, N. Y. The company, on the same date, advanced kerosene tank wagon prices one-half cent in New York and the New England states.

Standard Oil Co. of Indiana effective April 30 advanced kerosene tank wagon prices 1 cent throughout the territory except in Michigan and Indiana. Effective April 21 same company advanced gasoline service station price to 18.4 cents at Huron, S. Dak.

Standard Oil Co. of Nebraska effective April 30 advanced kerosene tank wagon price 1 cent in Nebraska.

Standard Oil Co. of California effective April 27 reduced gasoline tank wagon and service station prices 1 cent at Seattle and Tacoma, Wash.

Standard Oil Co. of Louisiana effective April 23 advanced kerosene tank wagon price 2 cents at New Orleans, La.

Continental Oil Co., effective April 30, advanced gasoline tank wagon and service station prices 1 cent at Butte, Mont., and one-half cent at Salt Lake City, Utah.

CRUDE OIL PRICES

(Continued from Preceding Page)

siana, Gulf Refining Co. and Louisiana Oil Refining Co., April 11, 1932. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co; East El Dorado by Magnolia Petroleum Co., effective April 6, 1932; by Gulf Refining Co., effective April 11, 1932; Stephens, Ark., by Louisiana Oil Refining Co. and Atlantic Oil Producing Co.

SOUTH CENTRAL AND SOUTHWEST TEXAS

Darst Creek (Apr. 1, 1932)*	$ .75
Luling (Apr. 1, 1932)*	.64
Mirando (Apr. 1, 1932)*	.90
Pettus (April 11, 1932)‡	1.00
Salt Flat (April 11, 1932)‡	.75
Thrall§	
Lytton Springs (Lockhart) (Apr. 1, 1932)*	.94
Dobrowolski¶	
Same as Mid-Continent gravity scale up to and including 38-38.9°.	
Somerset¶	
Same as Mid-Continent gravity scale up to and including 38-38.9°.	

*Magnolia Petroleum Co., The Texas Company. Humble Oil & Refining Co. posted 80 cents for Mirando, April 11. §Thrall prices same as North Central Texas less 19½ cents per cwt. freight. ¶Grayburg Oil & Refining Co., Pioneer Oil & Refining Co. and Texas Petroleum Products. ‖Pioneer Oil & Refining Co. ‡Humble Oil & Refining Co.

MIDDLE WESTERN STATES

Ohio Oil Co.

(Effective April 11, 1932)

Lima	$1.15
Wooster	1.25
Illinois	1.10
Indiana	.75
Princeton	1.10
Plymouth	Shut in
Western Kentucky	1.05
Midland, Mich. (Oct. 9, 1931)*	.55
Dundee, Mich.†	
Same as Stanolind Crude Oil Purchasing Co.'s Mid-Continent gravity scale Upper and Lower Traverse Sands, Mich.†	
....Same as Mid-Continent gravity scale	
Somerset, Ky. (April 25, 1932)	.55
Hart County, Ky. (April 16, 1932)‖	.85

*Posted by Pure Oil Co. †Posted by Standard of Indiana for boat shipment. §Posted by Stoll Refining Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and delivered through own pipe line.

MEXICO

Panuco*	$ .47

*F.o.b. ship, based on March transactions and exclusive of production and export taxes and bar dues.

CANADA

Ontario (Nov. 3, 1931):	
Petrolia*	$1.90
Oil Springs*	1.97
Alberta (Apr. 22, 1932):	
Turner Valley†:	
Crude oil 40-44.9	1.56
Crude oil 45-45.9	2.18
Crude oil 50 and above	2.80
Crude naphtha	3.32
Discolored naphtha	3.08

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Of Interest to Sales Departments

February Average Daily Consumption Gasoline Declines

Gasoline consumption in the United States during February showed an increase over that consumed for the same month a year ago but this was due to there being 29 days this year and only 28 days in the month a year ago. The consumption of gasoline for February as shown by state tax returns and compiled by the American Petroleum Institute appears below:

GASOLINE CONSUMPTION BY STATES, FEBRUARY, 1932

	Month of—	
	Feb., 1932 (gallons)	Feb., 1931 (gallons)
Alabama	10,683,000	11,501,000
Arizona	5,406,000	5,356,000
Arkansas	7,825,000	10,122,000
California	100,581,000	107,457,000
Colorado	10,615,000	11,488,000
Connecticut	15,212,000	13,372,000
Delaware	2,325,000	2,642,000
Dist. of Columbia	7,376,000	6,046,000
Florida	21,124,000	21,396,000
Georgia	16,352,000	15,772,000
Idaho	2,353,000	2,919,000
Illinois	67,403,000	68,461,000
Indiana	29,490,000	29,697,000
Iowa	20,865,000	26,403,000
Kentucky	11,199,000	11,131,000
Louisiana	13,224,000	13,125,000
Maine	4,928,000	3,864,000
Maryland	13,267,000	11,650,000
Massachusetts	33,944,000	30,736,000
Michigan	50,937,000	47,700,000
Minnesota	19,384,000	24,701,000
Mississippi	*8,206,000	8,697,000
Missouri	27,902,000	36,661,000
Montana	2,839,000	4,092,000
Nebraska	11,142,000	17,695,000
Nevada	1,340,000	1,172,000
New Hampshire	3,155,000	2,787,000
New Jersey	50,446,000	43,241,000
New Mexico	3,323,000	3,422,000
New York	116,244,000	91,404,000
North Carolina	20,542,000	19,523,000
North Dakota	2,343,000	4,977,000
Ohio	61,333,000	66,749,000
Oklahoma	19,825,000	22,261,000
Oregon	10,022,000	11,007,000
Pennsylvania	72,123,000	61,407,000
Rhode Island	5,850,000	5,227,000
South Carolina	7,730,000	8,489,000
South Dakota	4,716,000	7,634,000
Tennessee	14,452,000	14,291,000
Texas	53,666,000	54,653,000
Utah	3,464,000	3,566,000
Vermont	2,065,000	1,804,000
Virginia	15,810,000	14,443,000
Washington	15,605,000	16,433,000
West Virginia	8,137,000	7,810,000
Wisconsin	25,390,000	25,718,000
Wyoming	1,826,000	2,192,000
Total	1,033,983,000	1,032,804,000
Daily average	35,655,000	36,886,000
Change from previous year:		
Tot. inc. or dec.	—1,179,000	.....
Pct. dec. in dly. average	†—3.34%	.....

*Estimated. †February 1932 had 29 days.

DEVELOPS PETROLEUM JELLY

NEW YORK, May 2.—After considerable difficulty and research, the Soviet oil trust has at last succeeded in developing production of a satisfactory petroleum jelly, for which there is an extensive domestic demand, according to reports from Russia.

Crude from the Kara-Choohoor Field is being utilized in the production of petroleum jelly, yielding a larger quantity and better quality than that produced by other Russian crudes. Only 16 to 17 per cent sulphuric acid is used in the purification of petroleum jelly concentrate obtained from Kara-Choohoor mazout, as compared with 22 to 25 per cent used on the product of other fields, and the loss during treatment is but 25 to 30 per cent, against 40 per cent on other yields.

BRITISH COLUMBIA TAX

CHATHAM, Ontario, Apr. 23.—The new British Columbia gasoline tax of 7 cents a gallon became effective April 18. Previous exemptions to fishermen, boat-owners, industrial plants and others are completely discontinued.

PROPERTIES OF FUEL OILS OF DIFFERENT A. P. I. GRAVITIES

By O. F. Campbell
Combustion Engineer, Sinclair Refining Co.

Due to the present low fuel oil prices, the use of fuel oil for power plants and industrial plants is rapidly increasing. The combustion of fuel oil can be greatly aided if some of the fuel oil characteristics are known.

It is generally known throughout the industry that heavy fuel oils contain more B.t.u. per gallon than light fuel oils. Heavy fuel oils contain less hydrogen than light fuel oils and can be burned with higher theoretical efficiency. In addition to the higher B.t.u. content per gallon the heavy fuel oil can be burned more efficiently and therefore should be burned wherever possible. The heavier the fuel oil the higher the viscosity and pour, and as a general rule all heavy fuel oil should be heated before burning.

When the management of any concern decides to burn fuel oil it must decide between light and heavy fuel oil. If equipment is provided for proper heating and pumping any fuel oil can be burned that can be shipped by tank car. There are a great many industrials equipped to burn light fuel oil where it would not be economical to burn heavy fuel oil due to cost of providing proper heating and pumping equipment. Where proper equipment is provided for handling heavy fuel oil, Table 1 will be of benefit.

Table 1 was compiled from Tagliabue manual and Bureau of Mines Publication No. 97, entitled, "Thermal Properties of Petroleum."

The per cent hydrogen by that formula agrees within 1 per cent with values obtained by combustion analyses of a wide variety of petroleum oils and also with known values for hydrocarbons of the paraffin series. The above curve and chart is not absolutely accurate for naphthene base fuel oils or heavy fuel oils from cracking stills but is sufficiently accurate for practical purposes.

RELATION OF GRAVITY OF LIQUID PETROLEUM FUELS (ASH, H_2O AND S FREE) TO THEIR COMPOSITION THEORETICAL CO_2 AND GROSS THERMAL VALUES OBTAINED BY COMPLETE COMBUSTION

Gravity A.P.I. degrees @ 60°F.	Gravity Specific @ 60°F./60°F.	Density lbs. per gallon	Total heat of combustion at constant volume B.t.u./lb.	Total heat of combustion at constant volume B.t.u./gal.	Max. pct. CO_2 by volume	Pct. carbon by weight	Pct. H_2 by weight	Carbon-hydrogen ratio
0	1.0760	8.962	17,944	160,811	16.687	90.14	9.86	9.14
1	1.0679	8.895	18,009	160,192	16.637	90.02	9.98	9.03
2	1.0599	8.828	18,074	159,554	16.591	89.90	10.10	8.90
3	1.0520	8.762	18,137	158,913	16.545	89.78	10.22	8.78
4	1.0443	8.698	18,198	158,283	16.499	89.66	10.34	8.67
5	1.0366	8.634	18,258	157,642	16.457	89.55	10.45	8.56
6	1.0291	8.571	18,317	156,993	16.415	89.44	10.56	8.46
7	1.0217	8.509	18,374	156,346	16.374	89.33	10.67	8.37
8	1.0143	8.448	18,431	155,706	16.328	89.21	10.79	8.26
9	1.0071	8.388	18,486	155,062	16.290	89.11	10.89	8.18
10	1.0000	8.328	18,540	154,401	16.249	89.00	11.00	8.09
11	.9930	8.270	18,590	153,739	16.211	88.90	11.10	8.00
12	.9861	8.212	18,640	153,072	16.170	88.79	11.21	7.92
13	.9792	8.155	18,690	152,417	16.133	88.69	11.31	7.84
14	.9725	8.099	18,740	151,775	16.095	88.59	11.41	7.76
15	.9659	8.044	18,790	151,147	16.059	88.49	11.51	7.68
16	.9593	7.989	18,840	150,513	16.021	88.39	11.61	7.61
17	.9529	7.935	18,890	149,892	15.984	88.29	11.71	7.53
18	.9465	7.882	18,930	149,206	15.951	88.20	11.80	7.47
19	.9402	7.830	18,980	148,613	15.914	88.10	11.90	7.40
20	.9340	7.778	19,020	147,938	15.881	88.01	11.99	7.34
21	.9279	7.727	19,060	147,277	15.848	87.92	12.08	7.27
22	.9218	7.676	19,110	146,688	15.815	87.83	12.17	7.21
23	.9159	7.627	19,150	146,057	15.782	87.74	12.26	7.15
24	.9100	7.578	19,190	145,422	15.749	87.65	12.35	7.09
25	.9042	7.529	19,230	144,783	15.716	87.56	12.44	7.03
26	.8984	7.481	19,270	144,159	15.687	87.48	12.52	6.98
27	.8927	7.434	19,310	143,551	15.655	87.39	12.61	6.93
28	.8871	7.387	19,350	142,938	15.626	87.31	12.69	6.88
29	.8816	7.341	19,380	142,269	15.593	87.22	12.78	6.82
30	.8762	7.296	19,420	141,688	15.564	87.14	12.86	6.77
31	.8708	7.251	19,450	141,032	15.536	87.06	12.94	6.72
32	.8654	7.206	19,490	140,445	15.507	86.98	13.02	6.68
33	.8602	7.163	19,520	139,822	15.478	86.90	13.10	6.63
34	.8550	7.119	19,560	139,248	15.453	86.83	13.17	6.59
35	.8498	7.076	19,590	138,619	15.425	86.75	13.25	6.54
36	.8448	7.034	19,620	138,007	15.396	86.67	13.33	6.50
37	.8398	6.993	19,650	137,412	15.371	86.60	13.40	6.46
38	.8348	6.951	19,680	136,796	15.343	86.52	13.48	6.41
39	.8299	6.910	19,720	136,265	15.318	86.45	13.55	6.38
40	.8251	6.870	19,750	135,683	15.293	86.38	13.62	6.34

NEW YORK ESTABLISHED RECORD

NEW YORK, May 2.—Sales of gasoline in New York State in February established a new high record at 116,244,172 gallons, an increase of 27 per cent over the 91,404,179 gallons sold in February, 1931, according to the Department of Taxation and Finance. Sales in February, 1930, were 85,675,088 gallons. February sales this year were 10 per cent in excess of those for the previous month, when 105,664,067 gallons were sold in the State.

SPANISH TAX ON GASOLINE

NEW YORK, May 2.—For the purpose of balancing the Spanish budget a number of excise and other taxes have been increased or modified by a law which became effective March 18.

Included in the products is gasoline, on which a temporary excise tax of 0.10 per liter is levied.

MINNESOTA DEMAND LESS

The inshipments of gasoline into Minnesota the first quarter of this year were 8,423,293 gallons or 11 per cent less than the same period last year. The inshipments each month of the first quarter were less than the corresponding month of the first quarter of 1931. The following table gives the shipments in gallons by months:

	1931	1932
January	28,269,080	26,039,062
February	24,700,515	19,384,266
March	29,030,631	28,153,605
Total	82,000,226	73,576,933

INCREASE IN NEW JERSEY TAX

An agreement has been reached by Governor Moore of New Jersey and legislative leaders of both parties providing for an increase of 2 cents in the State's gasoline tax. The additional tax which is expected to become effective June 1 is to provide funds for the unemployed. The present tax is 3 cents per gallon.

PETROLEUM PRODUCTS SHOW RECORD DECLINE

The wholesale prices for petroleum products have declined more than any other major commodity, according to data collected by the Department of Labor for the first three months of 1932. Taking 1926 as 100, the index figure for petroleum products at the beginning of 1931 was 50.4, or 27.8 points below the figure of 78.2 for all commodities.

By the end of June, the spread between the index figure for petroleum products and all commodities had increased to 41.4 points. At this time all commodities stood at 72 and petroleum products had fallen to 30.7. During the first six months of the year, all commodities had dropped 6.1 points, while petroleum products had fallen 19.7 points. By the end of December the gap between the index figure for all commodities and petroleum products had been shortened to 29 points.

During the first three months of 1932 as shown in the following table, petroleum products have increased from 38.8 to 39.8 points while all commodities have declined from 67.3 to 66, or 1.3 points.

	Av. first 3 months 1932
All commodities	66.5
Farm products	51.1
Foods	63.2
Hides and leather products	78.3
Textile products	59.5
Fuel and lighting	68.0
Petroleum products	39.1
Metal and metal products	81.2
Building materials	73.8
Chemicals and drugs	75.5
House furnishing goods	77.4
Miscellaneous	65.0

CALIFORNIA GASOLINE SALES GAIN IN MARCH

LOS ANGELES, Calif., Apr. 30.—In contrast to the situation in February, the March consumption of gasoline in California showed an increase over March of last year. The gasoline tax collections in March totaled $3,438,095, an increase of 3.4 per cent over the corresponding period in 1931. The February collections were 11.14 per cent under February, 1931.

All of the major distributors showed substantial gains in March over February. The Standard Oil Co. of California led with almost 25,000,000 gallons for the month. The following report gives the gallonage of companies selling more than 1,000,000 gallons during March:

	Company—	March	February
1	Standard	24,846,388	21,541,380
2	Shell	14,817,986	10,892,737
3	Union	12,445,822	11,381,934
4	Associated	11,121,803	6,561,435
5	Richfield	8,449,352	7,389,689
6	General Pet.	7,388,055	4,742,950
7	Wilshire	6,845,628	4,163,641
8	Texaco	4,911,648	3,157,364
9	Rio Grande	4,120,133	10,381,934
10	Hancock	2,952,199	2,619,461
11	Macmillan	2,857,080	2,892,600
12	Caminol	1,438,022	1,344,915
13	Western	1,282,614	1,062,403
14	Seaside	1,119,278	920,543
15	Norwalk	1,029,371	722,563

BUILDS BOSTON TERMINAL

NEW YORK, May 2.—Tide Water Oil Co. will materially extend its New England operations through establishment of an important deep water terminal in the Chelsea Creek area of Boston.

Tide Water Oil Sales Corp., marketing subsidiary, has purchased a 42-acre tract at Revere for the terminal, which was licensed for the storage of petroleum last year.

Chelsea Creek will be dredged to a mean low water depth of 25 feet to permit of the movement of deep water tankers to the new terminal site.

XUM

Brief Items for Petroleum Refiners

Value of Exports Substantially Less First Three Months

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Apr. 29.—Domestic exports of petroleum and products in March declined from a value of $22,270,708 in 1931 to $17,679,538 in March of this year, showing a decrease in value of $4,591,170.

For the three months ending March, 1931, the value of petroleum exports was $75,952,063 compared with $52,938,891 for March of this year, a decline in value of $23,013,172.

In the same periods there was also a decline in the value of imports from $10,094,236 in March, 1931, to $7,170,869 in March, 1932. The decline in the value of these importations for the three months ending with March was from $28,603,786 in 1931 to $20,106,395 in the first three months of 1932.

However, crude oil imports increased from 3,714,741 bbls. in March, 1931, to 4,854,009 bbls. in March, 1932. This increase in the importation of crude reversed the recent trend of oil imports for in the first three months of 1931 the imports totaled 12,856,332 bbls., dropping to 11,608,111 bbls. in the first three months of the present year. These figures doubtless represent the influence of the tariff on oil imports provided for in the pending revenue bill. The excess importation of crude came from Mexico, Venezuela and the Netherland West Indies, while the imports from Colombia actually decreased from 1,367,000 bbls. in March, 1931, to 735,000 bbls. in March, 1932. Imports of crude from Mexico increased from 240,000 bbls. in March, 1931, to 1,084,000 in March, 1932. The increase in these periods from the Netherland West Indies was from 140,486 bbls. to 524,076 bbls. and from Venezuela from 1,709,995 to 2,244,780 bbls.

The imports of advanced and refined oils remained practically the same in the two periods. There was a slight decrease from 4,061,131 bbls. in March, 1931, to 4,003,473 bbls. in March, 1932.

Importation of topped including fuel oil increased from 2,448,400 in March, 1931, to 2,872,950 in March, 1932. The Netherland West Indies supplied most of this oil or 2,608,400 bbls.

Gasoline, naphtha and other light products imported showed an actual decrease from 1,607,487 bbls. in March, 1931, to 1,126,794 bbls. in March, 1932. All of this product came from Trinidad and Tobago and the Netherland West Indies. Imports of paraffin and paraffin wax increased from 1,289,280 pounds in March, 1931, to 3,695,810 pounds in March, 1932.

The exportation of crude petroleum showed a marked increase in March compared with the same month of the previous year. These exports during March, 1931, totaled 1,585,639 bbls. valued at $1,443,605, increasing to 2,090,098 bbls. valued at $1,881,676 in March, 1932, showing an increase in quantity of 504,458 bbls., an increase in value of $438,071. Canada increased its taking of crude from 1,180,116 bbls. in March, 1931, to 1,402,496 bbls. in March, 1932. Japan increased from 352,163 to 477,181 bbls. Exports of refined oils decreased from 6,516,219 bbls. valued at $18,961,664 in March, 1931, to 6,362,047 bbls. valued at $14,601,103 in March, 1932.

Gasoline naphtha and other light products exported declined from 2,840,324 bbls. valued at $8,425,272 in March, 1931, to 2,901,013 bbls. valued at $6,334,358 in March, 1932. Illuminating oil exports

(Continued on Page 39)

MID-CONTINENT MOVES ITS NEBRASKA OFFICES

The Mid-Continent Petroleum Corp. will consolidate its Nebraska retail offices, formerly at Lincoln, with the company's offices in Tulsa. The Tulsa offices will include supervision of the company's stations in Oklahoma, Kansas, southwestern Missouri, northwestern Arkansas and Nebraska. R. H. Thomas, formerly western division manager, has been named manager of the consolidated division and will move from Lincoln to Tulsa. J. J. Dowling, formerly assistant manager of the Lincoln offices, will remain in Lincoln as local manager.

NEWFOUNDLAND TO GET IMPERIAL OIL PRODUCTS

The Imperial Oil, Ltd., of Canada has reached an agreement with the Newfoundland government by which the Imperial company will underwrite a $2,000,000, 5½ per cent bond issue to the extent of $1,750,000 at a price of not less than 94. The company will pay the government during the currency of the loan $300,000 annually in consideration of the exclusive right to import petroleum products into the dominion.

For every 100 gallons of gasoline and kerosene sold in excess of 3,500,000 gallons the company will pay $6, with a reduction of the capital sum in the same amount for any deficiency below the fixed figure. The wholesale price at St. John's is fixed at 24 cents an imperial gallon for gasoline, subject to variations in landed cost.

GASOLINE SMUGGLING CHARGED

CHATHAM, Ontario, Apr. 30.—It is charged that smuggling of gasoline from Detroit, Mich., to Ontario points has become a regular practice, and Windsor gasoline companies will ask the federal government to take action. With recent increases in federal and provincial taxes, the movement has been accentuated. It is claimed that for 12½ cents motorists can buy in Detroit a grade of gasoline that costs 28 cents in Windsor; that individual car owners make a regular practice of filling up in Detroit, and that speedboat runners are bringing in wholesale lots for sale.

Information from Ottawa is to the effect that the practice has been known to the Department of National Revenue for years; but that the customs preventive staff at Windsor is not large enough to examine all cars adequately.

RUSSIANS VISIT UNITED STATES

NEW YORK, May 3.—Philip Rabinovich, chairman of the Russian Oil Products Co., and K. Riabok and R. M. Friedman, Soviet oil leaders, are due on the steamer Bremen late today for a series of conferences with American oil men. As far as could be learned here today the purpose of the visit is to negotiate with Socony-Vacuum Corp. in regard to the contracts which the Socony holds for the distribution of Russian oil in foreign markets but it is rumored that the Russian representative may seek agreements with American oil companies with respect to supplies and prices in markets outside of the United States.

NEW ARGENTINE REFINERY

The Yacimientos Petroliferos Fiscales has been authorized by the Argentine government to construct a refinery at LaPlata for the manufacture of all standard petroleum products including lubricating oils, waxes, greases and asphalt. This action is expected to result in a material decline in the imports of foreign lubricants.

EXPLAINS OPERATIONS OF SHELL IN CANADA

CHATHAM, Ontario, Apr. 30.—A further sitting of the federal committee investigating gasoline prices in Canada heard evidence by O. B. Roger, secretary treasurer of the Shell Oil Co. of Canada. Mr. Roger testified that his organization had no refineries in Canada, but in 1931 imported about 30,000,000 imperial gallons of gasoline. For these it paid the parent company in the United States, the Shell Petroleum Corp., the price set by the Dominion appraiser on imported gasoline. It would be possible to buy the gasoline at more than a cent a gallon less, but in that event the difference must be paid to the Dominion government, and the company preferred to pay the extra amount to the parent company. The company paid 2½ cents regular tariff but no dumping duty.

Mr. Roger stated that the Canadian company was not remunerated by the parent company for giving the full tariff price. It had operated at a loss in 1930 and 1931. In 1931 it had lost $100,000 in exchange rates. In its retail prices the company generally followed the lead of Imperial Oil, Ltd., not of necessity but of its own volition.

H. W. Wilson, sales manager of the Shell Oil Co. of Canada, gave evidence regarding distribution and sales costs, on which he promised a more detailed report at a later date.

BRITISH IMPORTATIONS SHOW LARGE DECREASES

NEW YORK, May 2.—Imports of crude and refined petroleum into the United Kingdom in March amounted to 160,190,038 gallons, a sharp drop from the 208,789,296 gallons imported in March last year. Detailed data on these imports follow:

	Gallons	
	Mar., 1932	Mar., 1931
Gasoline	63,877,973	96,975,648
Kerosene	24,109,067	21,934,514
Lub oil	7,225,260	7,487,620
Gas oil	13,396,134	6,619,568
Fuel oil	33,378,478	41,627,720
Crude	15,456,328	33,403,763
Miscellaneous	2,746,798	740,463

Continued sharp decreases in imports from Persia have been shown in British import totals thus far in the year. During the first three months of 1932 a total of 47,301,503 gallons of Persian crude was imported, against 82,314,197 gallons in the same months last year. Imports of crude from other countries in the first quarter this year amounted to 34,083,914 gallons, against 25,726,984 gallons in the first quarter of 1931.

MERGE RUMANIAN COMPANIES

The Rumanian petroleum companies Creditul Minier, Sondajul, Petrolul Romanesc, Petrol Govora and I.R.D.P. are negotiating for the formation of a merger to operate under the name Societatea Nationala a Petrolului (National Petroleum Co.), with 30 per cent of the capital subscribed by the government, according to U. S. Department of Commerce reports. Further government participation would consist principally of oil field allotments and the renouncement of outstanding royalties due the state from the above companies. In addition, the government proposes to grant the new company the monopoly of exporting to France under the petroleum quota established in the Franco-Rumanian oil agreement. This company would purchase from all other companies certain agreed quotas and effect the export to France. This monopoly, however, would require agreement of the principal Rumanian oil companies, which is considered difficult to obtain.

SHELL BUILDING NEW VAPOR RECOVERY UNIT

HOUSTON, Tex., May 3.—Shell Petroleum Corp. has just started construction at its Houston refinery of a new gasoline absorption plant for the recovery of waste gases. The unit will replace the compression equipment now in service. It will have a capacity of 7,000,000 feet of gas daily.

The recovery plant is a part of the $1,000,000 construction program under way at Houston which includes this and a new Dubbs unit. Work on the latter is progressing but has been delayed considerably because of slowness in arrival of material.

LESS FUEL OIL USED IN GENERATING ELECTRICITY

Fuel oil is being replaced by natural gas for generating electric power in the United States according to the annual summary of statistics covering the operation of electric power plants compiled by the department of commerce. During the past three years this change has been most apparent and gas seems to be replacing oil faster than coal. This may be accounted for by the fact natural gas and oil are found in the same or nearby fields of the petroleum producing states and the first development in the marketing of petroleum products was to refine the crude oil and sell the residuum as fuel oil. During the past three years there has been a decided expansion of gas distributing systems and these lines have been pushed through the territories into which fuel oil was shipped for industrial use. The relative consumption of fuel oil, gas and coal during the past 10 years shows these trends more conclusively.

Year—	Coal (short tons)	Fuel oil (bbls.)	Gas (M. cu. ft.)
1922	34,179,000	13,197,000	27,172,000
1923	38,966,000	14,684,000	31,433,000
1924	37,556,000	16,630,000	48,443,000
1925	40,222,000	10,246,000	46,521,000
1926	41,311,000	9,399,000	53,267,000
1927	41,888,000	6,782,000	62,919,000
1928	41,350,000	7,158,000	77,326,000
1929	44,937,000	10,124,000	112,707,000
1930	42,898,000	9,260,000	120,290,000
1931	38,734,000	8,123,000	139,328,000

CRACKING UNIT OPERATING

The new 75,000-ton cracking plant of Gewerkschaft Elwerath is now in operation at Misburg, Germany. It was constructed primarily to distill oil from a well brought in by Elwerath with the assistance of other German enterprises, including the Wintershall potash interests and the Prussian State. The enterprise will be operated under the firm name of Gewerkschaft Deutsche Erdoel Raffinerie. The company intends to produce gasoline only, and its output is already contracted for, particularly by the German postal service, which will use it for its post and passenger omnibuses. If the Elwerath output is insufficient to meet requirements of the contract, the company has recourse to supplies offered by local subsidiaries of foreign oil companies.

OPTION NOT EXERCISED

CASPER, Wyo., Apr. 30.—The option on the Egaso Operating Co.'s small refinery in the Osage Field held by H. H. Schwartz, Jr., of the Arro Oil & Refining Co., of Lewistown, Mont., has not yet been exercised. It is reported that the chief obstacle in the way is the disinclination of the Osage producers to make long-time contracts for their crude. A ready market is available for practically all the output of the field and the price holds steady at around $1 per barrel.

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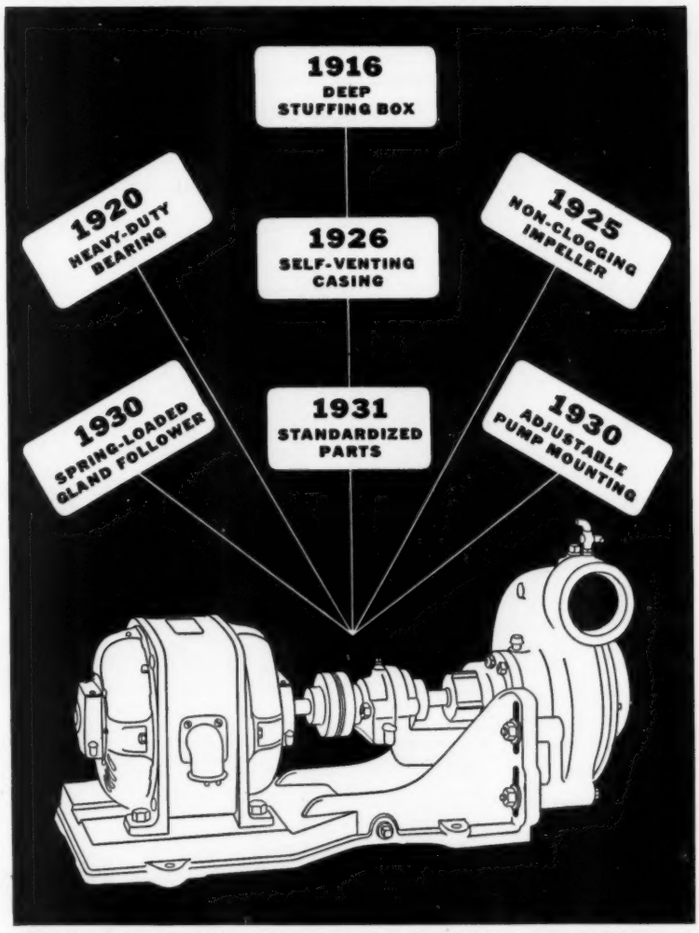

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GOULDS PUMPS

Manufacture of Natural Gasoline

California Natural Stocks Show Large Increase in March

The daily average natural gasoline production during March was 37,488 bbls., a small decrease under the 38,999 bbls. produced daily in February. Refinery utilization again decreased, but only slightly, amounting to 21,881 bbls. daily as compared to 22,099 bbls. Shipments fell off severely, amounting to only 1,068 bbls. daily while in February 6,071 bbls. were shipped daily. As a result of the decreased demand stocks increased to a considerably greater extent than in February, and at the end of the month amounted to 2,656,149 bbls. as against 2,191,990 bbls.

CALIFORNIA NATURAL GASOLINE STATISTICS FOR MARCH

	February	March
SUPPLY—		
Total production	39,763	37,885
Stocks trans. (deliv.) receipt-net	385	2,841
Total	40,148	40,726
DEDUCT—Refinery requirements:		
Runs to stills	3,436	3,530
Blended	18,663	18,351
Total	22,099	21,881
Gains (losses) unaccounted for, net	2,507	2,353
Net supply available to market	15,542	16,492
DEMAND—		
Domestic consumption	461	451
Off-shore shipments:		
Alaska and Hawaii	.....	8
Pacific, foreign expts.	2,569	320
Atlantic foreign expts.	3,502	740
Total market demand	6,532	1,519
Surplus or (deficit)	9,010	14,973
STOCKS — Last day of period:		
Total stocks	2,191,990	2,656,730
Outside United States (inc. Alaska, Hawaii and Canal Zone)	.....	494
Inside United States outside Pacific Coast territory	.....	87
Inside Pacific Coast territory:		
At refineries	1,628,878	2,060,038
Elsewhere	563,112	596,111
Inside Pacific Coast territory, last day	2,191,990	2,656,149
Inside Pacific Coast territory, first day	1,930,705	2,191,990
Inc. or (dec.) during the period	261,285	464,159

OPERATING DATA FOR MARCH

Number of plants operating	115
Daily capacity in thou. cu. ft.	2,688,919

PRODUCTION BY FIELDS

	Gas treated (thousand cu. ft.)	Natural gasoline produced (gallons)
Fullerton and Whittier	635,977	1,342,203
Midway	1,832,133	3,096,222
Huntington Beach	468,474	1,530,848
Kettleman Hills	8,336,001	11,795,225
Long Beach	4,294,747	9,755,700
Richfield	430,013	479,072
Santa Fe Springs	5,831,468	8,597,118
Seal Beach	807,270	1,369,808
Ventura Avenue	3,693,755	3,587,852
All other fields	4,842,002	7,255,094
Total	31,171,840	48,809,142

PRODUCTION BY METHODS

Type—	Gas treated M.C.F.	Natural gasoline produced (gallons)	Gasoline recovery per M.C.F. gas treated
Oil absorption	31,002,774	48,613,944	1.568
Compressor	169,066	195,198	1.155
Total	31,171,840	48,809,142	1.566

Finished gasoline produced at plants, in barrels 191

Stocks—	Gallons	Barrels
Nat. gasoline held by plant operators	6,477,475	154,226
Nat. gasoline held by refineries	105,080,766	2,501,923
Total	111,558,241	2,656,149

SOUTHERN GASOLINE BUILDING NEW PLANT

VENTURA, Calif., Apr. 30.—Southern Gasoline Co. is installing a natural gasoline plant to handle the gas from the Continental Oil Co.'s new Grubb well at San Miguelito. The plant is located at the foot of the hills on the Ventura-Santa Barbara highway. The well is in the hills.

The plant has a capacity of 10,000 gallons per day. The gas carries a gasoline content of 1 to 1½ gallons per 1,000 cubic feet. The total gas yield of the well is from 300,000 to 500,000 cubic feet per day. The plant will be able to care for one or more additional wells.

Southern Gasoline Co. has been organized by the same individuals who own and operate the Western States Gasoline Co.'s plant at Kettleman North Dome.

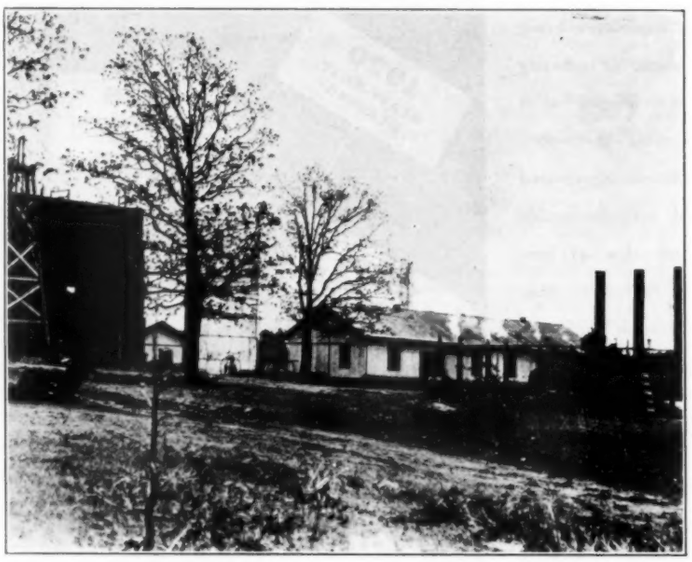
PANHANDLE GASOLINE STOCKS HIGHER APRIL 1

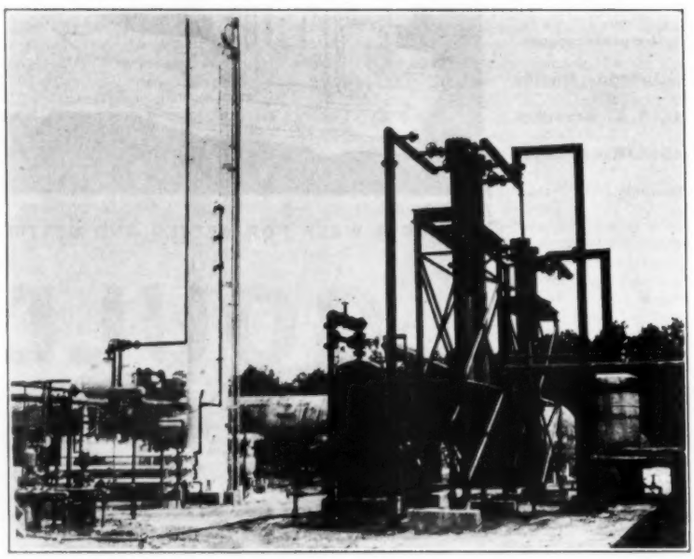
Natural gasoline production in the Panhandle area of Texas was slightly in excess of shipments during March and stocks were increased to 129,000 bbls. April 1.

There are 54 plants in the Panhandle area and these manufactured 533,875 bbls. of natural gasoline during March. Shipments from these plants were 527,885 bbls. for the month. Of this production the Phillips Petroleum Co., the largest manufacturer of the group accounted for 275,000 bbls. of the total manufactured.

County—	Production	Shipments
Carson	38,205	37,250
Gray	239,070	247,372
Hutchinson	224,590	221,251
Moore	14,875	8,892
Potter	3,185	4,722
Wheeler	14,010	14,398
Total	533,875	527,885

LISBON GASOLINE PLANT IN EAST TEXAS





Views of Lisbon Gasoline Co.'s eight-unit plant in the south end of the Joiner Field, southern Rusk County, Texas. The plant is processing 2,000,000 feet of gas a day from the Mid-Kansas Oil & Gas Co.'s properties in the field, and shipping out the gasoline from a loading rack on the I.&G.N. Railroad at Poindexter Switch.

World Production Natural Gasoline 1930 Shows Gain

World production of natural gasoline with the exception of but three small foreign countries amounted to 2,472,998,000 gallons in 1930 according to a survey recently completed by the U. S. Bureau of Mines. The United States accounts for the great bulk of this production, the East Indies ranking second. Comparable world production figures for 1927 were 1,746,678,000 and 1,977,960,000 gallons, indicating the substantial growth in the natural gasoline industry. Although the world production for 1931 is not known, the position of the United States will again dominate and may be expected to have decreased.

The following table shows the volume of natural gasoline produced by countries in 1930 and 1929.

Country—	1929	1930
United States	2,233,688,000	2,210,494,000
Netherl'd E. Indies	56,025,000	75,035,000
Rumania	17,805,000	36,243,000
Peru	30,500,000	32,040,000
Persia	29,263,000	28,468,000
Russia	15,162,000	22,344,000
Venezuela	13,094,000	17,394,000
Colombia	13,833,000	16,432,000
Poland	13,767,000	15,359,000
Mexico	4,956,000	7,190,000
Argentina	5,982,000	7,158,000
India, British	4,195,000	(*)
Japan	3,248,000	(*)
British Borneo (Sarawak)	3,202,000	3,479,000
Egypt	889,000	1,109,000
Taiwan (Formosa)	630,000	(*)
Trinidad	162,000	253,000
Total	2,446,401,000	2,472,998,000

*Figures not yet available

SIX AIR-BUTANE UNITS OPERATING IN OREGON

The Natural Gas Corp. of Oregon has completed its sixth air-butane plant in Oregon. This one is located at The Dalles, the others in operation being located at Klamath Falls, Bend, La Grande, Coquille and Cottage Grove.

The first was placed in operation during January, 1931, and the others during the 15 months since that time.

At The Dalles about 500 consumers have signed for the new gas service. The plant is similar in design to those built at other points. It was built by Standard Management & Operating Corp., a subsidiary organized to attend to this part of the business. J. H. Lane is resident engineer in charge.

INSTALLING GASOLINE PLANT

A natural gasoline plant is being installed in the San Miguelito district of California by the Southern Gasoline Co. to handle the gas produced by the Continental Oil Co.'s No. 1 Grubb, which is flowing 250 bbls. of oil per day. The new plant is at the base of the hills near the Ventura-Santa Barbara State Highway. It will have a capacity of 10,000 gallons per day. The capacity will be increased if the Continental company is forced to drill additional wells at this time. The company has a 1,000-acre lease which is considered proven property.

NEW EAST TEXAS PLANT

R. L. Crook of Shreveport, La., is building a 1,000,000-foot capacity casinghead gasoline plant on the Cox & Hamon fee land in the John Ruddle Survey, Gregg County, and has contracted to take gas from 40 wells in the vicinity of the plant.

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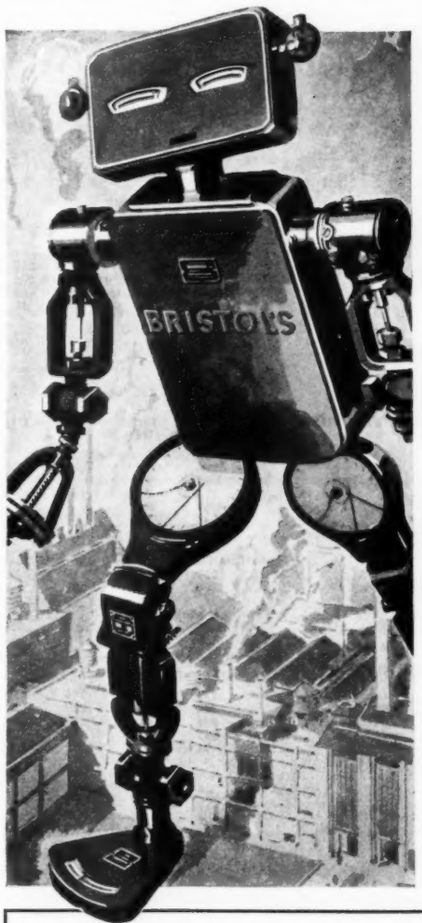

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Engine's Gasoline Needs Have Changed

Problem of Meeting New Motoring Conditions Stirs Keener Competition in Providing Fuel of High Antiknock Quality

By Gustav Egloff
Universal Oil Products Co.*

The gasoline appetite of today's automobile engine has changed radically. The need for meeting this changed condition satisfactorily has given rise to new and keener competition in the oil industry in furnishing high antiknock gasoline.

As might be expected, octane number mobilization started in the East where traffic swarms most thickly—where it is most difficult for the thousands of cars to thread their way through narrow, crowded streets.

New York, Philadelphia and New England were the first to demand antiknock fuels. Gasoline of high octane number met so striking a response along the eastern seaboard that the companies who furnished it extended their sales to other marketing territories. The drive swept westward through Pennsylvania and Ohio.

High octane number demand also began independently on the Pacific Coast, and from there the march is directed eastward. Now the drive is closing in from both east and west upon the Mid-Continent area, although its cities with their wide streets and plenty of room are the last to feel the need for high antiknock gasoline.

Fortunately the cracking process has been available and in a state of constant development so that its capacity to produce high octane fuels has been ahead of the automobile engine's demands.

The cracking process came to the rescue of the Pennsylvania refiners, who were endowed by nature with a crude oil which produced premier lubricating oil but knocking gasoline. The eastern United States, where demand for high octane number was strongest, was the natural market for Pennsylvania. Thanks to cracking, Pennsylvania refiners have been able to stay in this market, and today some of the finest gasoline being sold anywhere is made by cracking Pennsylvania gas oil, Pennsylvania kerosene, Pennsylvania naphtha and Pennsylvania straightrun gasoline.

Early Runs Showed High Yields

Some of the earliest commercial cracking runs on naphthas were carried out in Pennsylvania. The operation showed high yields of 73 or higher octane number gasoline.

One Pennsylvania refiner, operating the cracking process, obtained an average yield of 75.7 per cent of a 73 octane number finished motor fuel by processing naphtha, kerosene, gas oil, and a blend of kerosene and gas oil, successively, in the same unit. The total barrels of the different charging stocks processed was 21,956, and the average rate was 1,282 bbls. per day.

The data in Table 1 cover the details of the commercial cracking of different Pennsylvania charging stocks.

California oils are amenable to treatment by the cracking process. Refiners on the Pacific Coast can obtain high yields of gasoline of high octane number from California kerosene distillate, heavy naphtha and gas oil, topped crude oil, or fuel oil. The data in Table 2 indicate California's potential array of high octane number motor fuels.

Now, let us look at the part of the picture which most closely concerns the Mid-Continent refiner. Impelling forces are driving the required octane number of gasoline to higher and higher levels and the demand is closing in relentlessly until it will cover the country from coast to coast. Can cracking produce high yields of high octane motor fuel from Mid-Continent charging stocks? Here are some facts to answer the query.

Range of Cracking Stocks

These Mid-Continent cracking stocks range from gasoline, through naphtha, kerosene, and gas oil, to fuel oil. Their characteristics are indicated in the table. Octane numbers of the cracked gasolines from all the charging stocks are between 70 and 84, with yields, based on the charge, varying from 53.4 per cent to 80.9 per cent. It is to be noted that, for the same stock, an increased octane number for the gasoline is accompanied by increased gas formation and a consequent decrease in gasoline yield. For example, the cracked gasoline from the same 59.8° A.P.I. gravity Mid-Continent gasoline may be stepped up from 70 to 75 octane number, while the corresponding yields decrease from 80.9 to 73.5 per cent and the gas formation becomes 626 instead of 395 cubic feet per barrel. Similar ratios are shown using naphtha and kerosene charging stocks.

Increase in the octane number of gasolines is being made imperative by the motor car manufacturers who are continuously stepping up the compression ratios of their engines. The pressure they are exerting upon the oil industry for higher antiknock gasoline is best illustrated by showing the American passenger car engine trends by the per cent of motors (put out as new models) having compression ratios less than 4.5 to 1, 4.5-5.0 to 1, and those at or above 5.0 to 1 for the years 1924 to 1932. Most striking is the fact that in the last nine years the percentage of cars having compression ratios of 5.0 to 1 or over increased from 3.5 per cent of the total to 91.5 per cent.

The data in Table 3 are taken from Automotive Industries 1932, statistical issue. The percentages here are based on the number of new model motor cars put out by the manufacturers each year as to number of cylinders, bore, stroke, displacement and compression ratios.

TABLE 1—CRACKING PENNSYLVANIA NAPHTHA, KEROSENE AND GAS OIL
(One after the other—same cracking run)

Charging stock:	Ttl. run	Naphtha	Kerosene	Gas oil	Kero. and gas oil
Gravity, °A.P.I.	.....	54.4	47.0	37.7	41.5
Initial boiling point, °F.	.....	102	293	374	367
Per cent 400	.....	72.0	46.0	2.0	33.0
Per cent 437	.....	87.0	67.0	5.0	43.0
Per cent 572	.....	*504	*570	39.0	70.0
Hours on stream	411	144	96	56	115
Throughputs:					
Charging stock, total bbls.	21,956	...	...	...	...
Charging stock, bbls. per day	1,282	1,254	1,282	1,399	1,041
Yields:					
Finished gasoline, per cent charge	75.7	83.7	79.2	70.5	73.4
Residuum, per cent	15.4	10.0	11.7	17.7	20.2
Gas loss, per cent	8.9	6.3	9.1	11.8	6.4
Finished gasoline:					
Gravity, °A.P.I.	.....	63.4	61.5	63.0	61.5
Initial boiling point, °F.	.....	80	79	81	84
10 per cent	.....	117	115	121	117
20 per cent	.....	143	149	150	150
50 per cent	.....	232	253	242	250
90 per cent	.....	338	351	357	340
Endpoint	.....	368	400	390	372
Octane number	.....	74	70	75	74
Residuum:					
Gravity, °A.P.I.	.....	0.8	5.1	3.5	3.0
Viscosity S.F. at 122° F.	.....	32	17	19	28

*Endpoint.

TABLE 2—CRACKING CALIFORNIA KEROSENE, STOVE OIL, GAS OIL, FUEL OIL AND TOPPED CRUDE OIL

Charging stock:	Kero. dist.	Naph. and gas oil	Stove dist.	Gas oil	Topped crude	Fuel oil
Gravity	38.3	35.5	34.5	26.1	24.7	17.8
I.B.P., °F.	404	312	460	496	422	420
Per cent at 437° F.	25.0	35.0	...	...	1.5	Trace
Per cent at 572° F.	*544	72.5	77.5	15.0	31.5	12.0
Per cent basic sediment and water	Trace	...	Trace	...	0.4	0.2
Operating Conditions						
Pressure, lbs./sq. in.	347	400	350	350	350	252
Temperature, °F.	950	950	950	950	923	890
Product Yields						
Gasoline, per cent	75.2	76.0	70.8	61.3	58.1	39.6
Gravity	55.0	52.9	57.9	55.6	57.6	59.2
I.B.P., °F.	89	84	88	92	85	90
100 cc. A.S.T.M. distillation:						
% over, °F.						
20	184	204	175	186	188	185
50	287	302	274	283	286	272
90	385	417	385	408	384	358
Endpoint	397	428	401	429	398	377
Octane number	78	74	77	79	73	78
Residuum, per cent	9.6	14.1	15.9	29.0	37.4	59.4
Gravity	2.6	6.9	0.1	4.4	5.3	8.2
Viscosity at 122° F.	70	137	80	92	342	188
Gas and loss, per cent	15.2	9.9	13.3	9.7	4.5	1.0
Gas, cu. ft./bbl.	630	455	487	520	374	269

*Endpoint.

TABLE 3—CRACKING MID-CONTINENT GASOLINE, NAPHTHA, GAS OIL AND FUEL OIL

Charging stock:	Gasoline		Naphtha		Kerosene distillate		Gas oil	Fuel oil
A.P.I. gravity	59.8	59.8	53.5	53.5	39.4	39.3	35.3	25.8
Initial boiling point, °F.	115	115	222	222	378	424	448	557
100 cc. A.S.T.M. distillation								
% over, °F.								
5	153	153	250	250	420	...	474	...
10	177	177	263	263	440	444	488	611
20	213	213	277	277	462	452	504	647
30	237	237	287	287	476	...	516	677
40	258	258	298	298	486	...	529	*700
50	277	277	309	309	496	470	546	...
60	294	294	319	319	507	...	562	...
70	309	309	329	329	519	...	585	...
80	328	328	339	339	532	...	615	...
90	347	347	353	353	548	518	664	...
Endpoint	383	383	385	385	580	590	731	700
Bottoms, per cent	1.0	1.0	1.0	1.0	2.5	...	...	...
Loss, per cent	1.0	1.0	1.0	1.0	...	...	...	...
Operating Conditions								
Pressure, lbs./sq. in.	500	500	500	500	360	360	350	250
Temperature, °F.	975	1,000	1,000	1,000	949	950	967	915
Product Yields								
Gasoline, per cent of charge	80.9	73.5	80.0	72.7	75.5	71.6	65.2	53.4
A.P.I. gravity	60.9	59.1	58.0	55.5	58.5	59.1	61.0	59.4
Initial boiling point, °F.	104	89	81	91	96	86	84	81
100 cc. A.S.T.M. distillation								
% over, °F.								
20	186	180	212	204	180	173	166	179
50	255	259	284	280	276	253	252	271
90	346	356	359	358	382	376	360	386
Endpoint	376	379	382	382	398	392	392	400
Octane number	70	75	70	75	76	84	80	74
Residuum, per cent of charge	1.2	1.3	0.7	2.5	11.6	6.5	15.1	38.3
A.P.I. gravity	—0.6	—0.7	—4.0	—4.5	0.1	0.4	7.0	9.6
Visc. furol at 122° F. (sec.)	122	346	(†)	(†)	42	108	18	160
Gas and loss, per cent of charge	17.9	25.2	19.3	24.8	12.9	21.9	19.7	8.3
Gas, cu. ft./bbl. of charge	395	626	626	781	534	701	698	329

*38 per cent at 700. †37 at 212° F.

AMERICAN PASSENGER CAR ENGINE TRENDS

Number of Cylinders

(Based on number of models offered)

Year—	4 Cyl. %	6 Cyl. %	8 Cyl. %	12 and 16 Cyl %
1924	19.5	70.3	10.2	....
1925	14.8	67.8	17.4	....
1926	13.00	66.0	21.0	....
1927	6.00	65.0	29.0	....
1928	6.50	58.0	35.5	....
1929	4.00	55.00	41.00	....
1930	2.92	43.20	52.70	.98
1931	3.85	30.80	61.50	3.85
1932	4.20	30.60	54.20	11.0

Bore, Stroke, Displacement

(Based on number of models offered)

Year—	Bore, inches	Stroke, inches	Piston displ., cu. in.
1924	3.43	4.81	258.1
1925	3.48	4.73	262.6
1926	3.37	4.72	260.59
1927	3.26	4.67	254.86
1928	3.27	4.58	257.73
1929	3.27	4.57	261.27
1930	3.260	4.51	264.59
1931	3.21	4.45	273.00
1932	3.28	4.41	283.93

Compression Ratio

(Based on number of models offered)

Year—	Less than 4.5 to 1 %	4.5-5.0 to 1 %	5.0 to 1 and over %
1924	57.7	38.8	3.5
1925	42.1	53.9	4.0
1926	33.3	63.6	3.1
1927	28.9	55.3	15.8
1928	12.0	67.0	21.0
1929	8.0	37.0	55.0
1930	2.1	31.3	66.6
1931	1.3	26.7	72.0
1932	2.8	5.7	91.5

Plotting percentages of each group against the year, the curves clearly show the decline of lower compression ratios and the rapid climb of those models having compression ratios of 5.0 to 1 or higher.

A significant number of these high compression engines are going to be driven in the Mid-Continent area, and the necessity for high octane number gasoline will become more and more acute. Can there be any doubt that Mid-Continent gasolines will meet the octane army of the East and West?

*Delivered before Western Petroleum Refiners Association meeting, Excelsior Springs, Mo.

Feature Interviews In Pushing Sale of Standard Products

CHICAGO, Ill., Apr. 30.—As one answer to the problem of building business in spite of adverse conditions in 1932, the Standard Oil Co. of Indiana is now putting on an extensive and unique campaign of advertising its motor oil.

The campaign is attracting much attention because of its novelty in using the newspaper interview as the means of carrying a message to the public.

This year's advertising story regarding the motor oils completes a three-year program. In 1930 the company's production of a new kind of oil was featured with stress on the laboratory proof of its qualities. In 1931 the advertising reported proof of the quality of the oil by practical engineering tests made on the Indianapolis speedway and in zero cold rooms, under the eagle eye of the contest board of the American Automobile Association, and by a road test that lasted for several months.

For this year's proof the company decided to turn to the acid test of public opinion. To make this test a novel plan was adopted. Robert J. Casey, veteran Chicago reporter, and Miss Margaret Lane, daughter of the editor of the Northcliffe newspapers in England and herself a newspaper writer of note, were enlisted to go out and ask long-time users what they thought of Iso-Vis oils. A photographer went along to take snapshots of the actual interviews and cars involved. And now from week to week the company's advertisements are presenting the stories these reporters brought back of what Mr. and Mrs. Public had to say about their experience with the oils. No money was paid in any instance to the persons interviewed.

A similar series of interviews was obtained from farmers by Prof. J. Brownlee Davidson, eminent authority on agricultural engineering, with emphasis particularly on experience in use of Polarine oil in tractors. These interviews are being featured in advertisements in farm publications.

The campaign has several unusual angles besides its adaptation of the newspaper interview to advertising, one being that the advertisements tell of use of oil in different types of cars, so that in the end comments will have been presented from users of all the principal makes. Nearly 1,600 newspapers in 1,365 cities and towns are carrying the schedule.

OLD, DESERTED OIL DERRICK IS MEMORIALIZED IN POEM

In sending the poem below to The Oil and Gas Journal, H. G. Charles, of Sapulpa, Okla., writes: "I wonder what number of your many readers have ever thought of that particular angle?"

TO A DESERTED OIL DERRICK

To you, forgotten dream of bygone splendor
Alone, deserted, on yon naked hills;
A spectre lost in memory's dying embers
Retaining still a ghost of bygone thrills.

Your usefulness complete, your gift forgotten
The wealth you spilled into the laps of men
Brings no one back to pay you silent homage;
No poet finds you fruit for restless pen.

And yet to me a skeleton of romance
You symbolize a task, sublime, complete,
A monument to man's eternal power,
I place this wreath of memory at your feet.

JERSEY EMPLOYE LOANS

The Standard Oil Co. (New Jersey) has renewed its offer to employes to act as agent in procuring loans from a responsible New York bank up to 70 per cent of the market value of company shares held and put up as collateral. The offer was originally made after stock accumulated in the first stock acquisition plan was distributed among new employe stockholders.

To procure a loan, an employe must furnish the management with satisfactory proof that it is for the purpose of meeting an emergency such as sickness or death in the immediate family, or to aid in erecting or paying for a home. The rate of interest on such loans for the first six months of this year is 5 per cent and is subject to reconsideration by the bank for each succeeding semi-annual period.

The arrangement provides for repayment through deductions each pay day on a basis of about $1.50 monthly.

VALUE OF EXPORTS SUBSTANTIALLY LESS

(Continued from Page 34)

showed a heavy decrease of shipments or from 1,151,342 bbls. valued at $3,379,065 in March, 1931, to 875,743 bbls. valued at $2,060,325 in March, 1932. Japan increased its taking of this illuminating oil from 28,637 bbls. in March, 1931, to 136,866 bbls. in the same month of this year.

Gas oil and distillate fuel oil dropped to less than one-third of the shipments of March, 1931, when the exports of this product totaled 1,977,028 bbls. valued at $1,915,056 compared with only 590,659 bbls. valued at $638,505 in March, 1932. Fuel or bunker oil for vessels in foreign trade decreased from 3,666,728 bbls. in March, 1931, to 3,499,548 bbls. in March, 1932. Lubricating oil exports in March totaled 540,097 bbls. valued at $5,146,348, increasing to 604,808 bbls. valued at only $4,574,406 in March, 1932, giving evidence of the great decline in the price. Paraffin wax exports dropped from 30,466,677 pounds in March, 1931, to 15,884,691 pounds in March, 1932.

CALIFORNIA CRUDE OIL PRICES

STANDARD OIL CO OF CALIFORNIA
(Effective June 23, 1931)

UNION OIL CO. OF CALIFORNIA
(Effective June 20, 1931)

For current purchases of crude oil at the well (unless otherwise specified) for allowable crude oil produced in accordance with allocations made by the California Statewide Curtailment Committee.
(All gravities above those quoted take highest price offered in that field)

Gravity	Signal Hill	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canon	Athens-Rosecrans Domingues	Torrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills Buena Vista Hills	Lost Hills	Santa Paula	Orcutt	Gravity
14-14.9	$ .65	$.65	$.65	$.65	....	$ .65	....	$.65	$.65	$.65	....	$.55	$.55	$.65	$.55	14-14.9
15-15.9	.65	.65	.65	.65	....	.65	....	.65	.65	.65	....	.55	.55	.65	.55	15-15.9
16-16.9	.65	.65	.65	.65	....	.65	....	.65	.65	.65	....	.55	.55	.65	.55	16-16.9
17-17.9	.65	.65	.65	.65	....	.65	....	.65	.65	.65	....	.55	.55	.65	.55	17-17.9
18-18.9	.65	.65	.65	.65	....	.65	....	.65	.65	.65	....	.55	.55	.65	.55	18-18.9
19-19.9	.65	.65	.65	.65	$.65	.65	....	.65	.65	.65	....	.55	.55	.65	.55	19-19.9
20-20.9	.65	.65	.65	.66	.65	.66	....	.65	.65	.65	....	.55	.55	.65	.56	20-20.9
21-21.9	.65	.65	.65	.68	.66	.67	....	.65	.66	.65	....	.55	.57	.65	.57	21-21.9
22-22.9	.65	.65	*.66	.70	.67	.68	....	.66	.68	.65	....	.56	.59	.65	.59	22-22.9
23-23.9	.67	.67	*.68	.72	.68	.70	....	.67	.70	.66	....	.58	.60	.65	.61	23-23.9
24-24.9	.69	.69	*.70	.74	.69	.72	$ .69	.68	.72	.67	$ .65	.61	.62	.66	.63	24-24.9
25-25.9	.71	.71	* .72	.76	.70	.74	.71	.70	.74	.69	.65	.64	.64	.68	.65	25-25.9
26-26.9	.73	.73	* .74	....	....	.76	.73	....	....	.71	.65	.66	.66	.70	.67	26-26.9
27-27.9	.75	.75	* .76	....	....	.78	.75	....	....	.73	.68	.68	.67	.72	....	27-27.9
28-28.9	.77	....	....	....	....	.80	.77	....	....	.75	.71	.71	.69	.74	....	28-28.9
29-29.9	.79	....	....	....	....	....	.79	....	....	.77	.73	.74	.71	.76	....	29-29.9
30-30.9	.81	....	....	....	....	....	.81	....	....	.79	.75	.76	.72	.78	....	30-30.9
31-31.9	....	....	....	....	....	....	.83	....	....	....	.78	....	....	....	....	31-31.9
32-32.9	....	....	....	....	....	....	.85	....	....	....	.80	....	....	....	....	32-32.9
33-33.9	....	....	....	....	....	....	.87	....	....	....	.83	....	....	....	....	33-33.9
34-34.9	....	....	....	....	....	....	.89	....	....	....	.85	....	....	....	....	34-34.9
35-35.9	....	....	....	....	....	....	....	....	....	....	.87	....	....	....	....	35-35.9
36-36.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	36-36.9

Santa Paula and Orcutt—Posted only by the Union Oil Co.
Playa Del Rey—Subject to a field gathering charge of 5 cents per barrel.
Huntington Beach—Union Oil Co.'s price schedule reads: 14 degrees up to 22.9 degrees, inclusive, 65 cents per barrel; 23-23.9 degrees, 67 cents, with 2 cents added for each degree upward to 27-27.9 degrees, at 75 cents.
Wheeler Ridge—Standard Oil Co. posts 55 cents for all grades.
Coalinga—Standard Oil Co. and Union Oil Co. post 55 cents for all grades up to and including 24-24.9 gravity, and 57 cents for 25 gravity.
Newhall, McKittrick and Kern River—Standard Oil Co. posts 55 cents per barrel for all grades.
McKittrick, Kern River, Midway-Sunset, Elk Hills and Buena Vista Hills—Union Oil Co. pays 50 cents for 11 to 13.9 degrees, and 55 cents for all other grades.
Montebello—Standard Oil Co. and Union Oil Co. post 65 cents per barrel for all grades.
Whittier and La Habra—Standard Oil Co. posts 65 cents per barrel for all grades.
Elwood Terrace—Standard Oil Co. posts: 33-33.9 degrees, 79 cents; 34-34.9 degrees, 81 cents; 35-35.9 degrees, 84 cents; 36-36.9 degrees, 87 cents. All prices f.o.b. ship.
Santa Fe Springs—Union Oil Co.'s top price is 85 cents per barrel for 34-34.9 gravity.

ASSOCIATED OIL CO PRICES

Associated Oil Co. prices effective June 20 are as follows:
Ventura Avenue—22 gravity, 58 cents, with 2 cents added for each degree upward to and including 30 gravity, which is 74 cents.
Kettleman Hills—The Associated Oil Co., effective at 7 a.m., February 5, 1932, withdrew and canceled any and all prices heretofore published and in effect for Kettleman Hills oil.
Potrero—24 gravity, 69 cents, with 2 cents added for each degree upward to 34 gravity which is 69 cents.
General Petroleum Co. in Kettleman Hills, effective January 1, 1932: 33-33.9°, 66 cents; 34-34.9°, 68 cents; 35-35.9°, 70 cents; 36-36.9°, 72 cents; 37-37.9°, 74 cents; 38-38.9°, 76 cents; 39-39.9°, 78 cents.

THE OIL MAN'S CALENDAR

MAY

9—Cleveland, Ohio, Independent Petroleum Retailers of Ohio.
9-11—Tulsa, Natural Gas Dept., American Gas Association.
9-13—Atlantic City, N. J., National Fire Protection Association.
13-14—Wellsboro, Pa., A.P.I. Production Division, Eastern district, Penn-Wells Hotel.
15-17—Houston, Tex., National Oil Scouts Association of America.
16-20—San Francisco, Calif., twentieth annual meeting, U. S. Chamber of Commerce (special group session, oil industry).
17-19—Tulsa, Natural Gasoline Association of America, Mayo Hotel.

JUNE

1-3—Tulsa, mid-year divisional meetings, American Petroleum Institute, Mayo Hotel.
6-9—Detroit, Mich., National Association of Purchasing Agents.
20-24—Atlantic City, N. J., American Society for Testing Materials.

JUNE-JULY

Economic and Historical Exhibition (oil industry section), Rouen, France.

JULY-AUGUST

July 16 to August 28—Atlantic City, N. J., third American Fair, Atlantic City Auditorium.

AUGUST

23-26—Spokane, Wash., Pacific Coast Gas Association, Hotel Davenport.

SEPTEMBER

14-16—Atlantic City, N. J., annual meeting, National Petroleum Association.
15-17—Atlantic City, N. J., American Trade Association Executives.
22-23—Chicago, National Association of Motor Bus Operators.

OCTOBER

3-7—Buffalo, N. Y., National Metal Exposition and National Metal Congress, and American Society for Steel Treating.
10-14—Atlantic City, N. J., annual convention, American Gas Association.

NOVEMBER

10-12—Atlanta, Ga., Southeastern Economic Conference.
15-17—Houston, Tex., thirteenth annual meeting, American Petroleum Institute.

GULF COAST PRORATION ORDER BY COMMISSION

AUSTIN, Tex., May 2.—Orders were entered by the Railroad Commission April 28, fixing the oil production of the Reagan County Field, on University of Texas lands, at 25,000 bbls. per day, requiring that operators shall carry out former recommendations which included the killing and reconditioning of some of the wells, the reduction of the gas-oil ratio, and the prevention of premature water encroachment. The order appointed W. F. Knode as field umpire. It gave him authority, as an emergency measure, to authorize excess production during the process of reconditioning wells in the field.

The commission adopted its first proration order for the general Gulf Coast district, limiting each well to its present production, subject to revision of the amount produced by each well to improve the gas-oil ratio.

The order excepted the Sugarland and Raccoon Bend Fields, and fixed a maximum of 11,700 bbls. for the Sugarland and 6,000 bbls. for Raccoon Bend in Austin and Waller Counties.

Production of the entire Gulf Coast area, including the two fields given separate allowables, is approximately 110,000 bbls. per day.

PROSPECTS ARE BETTER SAYS PRESIDENT HOLMES

"On the whole I think the prospects are better than a year ago," says R. C. Holmes, president of The Texas Corporation, in an informal statement on the oil industry at the annual meeting.

"Efforts are being made continuously to accomplish something in the way of conservation and the control of oil production," he said. "These efforts are progressing slowly, but they are progressing."

"There is a move," he said, "to have Congress enact an interstate compact which was recommended by the administration along the lines of the general recommendation of President Coolidge in 1924. We are hopeful that something will be accomplished in this direction."

In answer to a question by a stockholder as to the state of the general export oil business, with more particular reference to France, Mr. Holmes said: "I can say that in general our export business, except for prices, has been reasonably satisfactory and we have made progress. In France we acquired an interest in a French refinery which will establish us in the gasoline and light oil trade in that country where formerly we were confined practically to the lubricating oil business. The refinery has recently been put in operation."

OIL FIELD ACCIDENT COMMITTEE ENLARGED

Three new members have been appointed to membership on the American Petroleum Institute's Committee on Accident Prevention in Oil Fields, and the committee has been called by Chairman Charles F. Roeser of the division of production to meet in Tulsa during the midyear meeting of the Institute, June 1, 2 and 3. The new members are J. L. Risinger, Magnolia Petroleum Co., Dallas, Tex.; Carl H. Martin, Phillips Petroleum Co., Bartlesville, Okla., and Gerald O. Lockwood, the Empire Companies, Bartlesville, Okla. R. E. Donovan, Standard Oil Co. of California, San Francisco, is chairman of the committee, and H. N. Blakeslee, Dallas, director of the department of accident prevention of the Institute, is secretary. Other members are: C. P. Anderson, Los Angeles, Calif.; H. W. Boggess, Tulsa; H. E. Dischinger, St. Louis, Mo.; John Hammerman, Jr., Houston, Tex.; C. L. Hightowner, Thurber, Tex.; L. R. Hodell, Tulsa; H. W. Jackson, Bradford, Pa.; J. L. Manes, Dallas, Tex.; George F. Prussing, Los Angeles, Calif.; R. B. Roaper, Houston, Tex.; T. N. Shaw, Casper, Wyo.; C. W. Smith, Chicago; J. P. Sutton, Findlay, Ohio; and D. J. Wallace, Tulsa.

RUSSIAN COMPETITION NEARS END IN EUROPE

Calculating that Soviet gasoline is being sold in Great Britain at a loss of 4 cents a gallon and that the Soviet government now has no money to sustain its foreign oil stations in competition with wealthy rivals, the London Daily Express believes Russia will soon disappear from the European oil market.

The oil crisis, the Express says, is simply the "inevitable result of a war of attrition wherein capitalist combines are outlasting the Soviets."

Late Fields

KANSAS

Derby Oil Co. and others' No. 1 Rainbow, NW cor. SE, Section 33-22-7w, Reno County wildcat, found a showing of oil and gas in the chat at 3,547-60 feet. This test may open another producing area in the county. A core of the formation showed considerable saturation and a drill stem test disclosed free oil in the hole. The 8-inch casing was being landed on top of the chat preparatory to making a production test.

G. P. Dickey Oil Co.'s No. 3 Decker, SW cor. NW SE, Section 35-19-2w, in the Ritz-Canton Pool, McPherson County, was given a potential of 4,506 bbls. of oil in 24 hours instead of 4,106 bbls. as previously reported. The first calculation was in error on account of 400 bbls. being overlooked. The oil was found in the chat at 2,967-70 feet.

In the Wright Pool, near Valley Center, in Sedgwick County, Continental Oil Co. and Gypsy Oil Co.'s No. 1 Corr, SE cor. NW, Section 12-26-1w, which is a quarter mile from the nearest production found the top of the Silicious lime at 3,438 feet and landed the casing at 3,443 feet and drilled to a total depth of 3,451 feet and is shut down waiting for the cement to set. Other wells in the field are producing from the Viola lime.

OKLAHOMA

Carter Oil Co. and others' No. 1 Monett, SW cor., Section 35-7-4, which has been shut in for 60 days, flowed 1,309 bbls. of oil in 19 hours, when first opened up. It was showing some water. This well opened a south extension to the St. Louis Pool, in southern Pottawatomie County. It will be produced the same as other wells in the Greater Seminole district, 44 per cent of its potential.

Patsy Oil Co.'s No. 1, SE cor. NE SE, Section 25-5-4, is a new location west of the Beebe Field, in Pontotoc County.

Clara Oil & Gas Co. and others' No. 1 in the SW cor. NW NE, Section 1-9-4, a wildcat west of the Earlsboro Field, in Pottawatomie County, found the top of the Simpson sand at 4,473 feet and was drilling in the same formation at 4,515 feet with nothing showing.

Production from the Oklahoma City Field was 155,602 bbls. from 163 wells on May 3 at 7 a. m.

Sovereign Oil Co.'s No. 1 Selacek, NE cor. SE, Section 3-12-5, Lincoln County wildcat, found a showing of oil in Misener sand at 4,281-84 feet, and another showing of oil in a core from the Hunton lime at 4,284-4,363 feet. The core from 4,287-4,302 feet showed oil. The top of the Sylvan shale was found at 4,363 feet and it was drilling at 4,398 feet.

Denver Producing & Refining Co. has purchased the interest of the Danciger Royalty Co. in No. 1 Burroughs, SE cor. SE SE SW, Section 10-11-3w, in the northwest section of the Oklahoma City Field. Consideration was not announced. The well is located on Block 31 of the Schillings addition and it has an adjusted potential of 10,279 bbls. and during the month of March produced 5,696 bbls.

Slick-Urschel, Inc.'s No. 12 Classen-Edwards, SE cor. SW SW, Section 3-11-3w, flowed 3,486 bbls. of oil in four hours and was shut in. The gas was estimated at 21,000,000 feet a day. The total depth is 6,495 feet and the 6-inch casing is landed at 6,351 feet.

High Spots in Field News

KANSAS

Public Service Commission appoints committee and issues new order for oil-gas conservation. Crude production declines.

NORTH LOUISIANA, ARKANSAS, MISSISSIPPI

Another good well in western Zwolle area. New operations in North Louisiana. New locations in Zwolle. Arkansas busier.

SOUTHWEST TEXAS

Caldwell County tests holding attention. Important tests in upper region of Balcones Fault Zone. Activity west of Luling.

ROCKY MOUNTAIN AREA

Hobbs, New Mexico, operators sign new proration agreement. Test in Converse County, Wyoming. Much interest in Colorado.

CALIFORNIA

Production in Middle Dome of Kettleman Hills definitely proved. Plan for unit development under way. State output down.

OKLAHOMA

New producing spots in Seminole area. Promising discoveries in Hughes, Seminole and Pottawatomie Counties. State production drops.

EAST TEXAS

Eighteen arrested on charges of oil thefts. New order limits production to 61 bbls. There were 157 locations and 136 completions during week.

GULF COAST

Interest revived in Montgomery County with second test nearing producing horizon. Gueydan test disappointing so far. Operations increasing.

WEST AND NORTH TEXAS

Tenth deep producing well at Big Lake ready for test. Considerable leasing in northwest Reagan and Sterling Counties. Eleven new locations in Ranger and 40 in Wichita Falls district.

SUBJECT OF TAXATION WILL FEATURE MEETING

Clarel B. Mapes, chairman of the Mid-Continent section, A.I.M.E., announces the annual spring dinner and meeting to be held in the University Club, Tulsa, at 7 p. m., Monday, May 9. This meeting is to be devoted to a number of addresses under the general head of "Taxation, Government Costs and the Oil Industry."

Dr. John E. Brindley, director of research, Oklahoma Tax Economy Association, Oklahoma City, will deliver a paper on "Financing State and Local Government." Other speakers scheduled for the meeting are Harry H. Smith, secretary-treasurer, Mid-Continent Oil and Gas Association, who will talk on "Curtailment of Government Costs," and William G. Skelly, president, Skelly Oil Co., Tulsa, who has been assigned the subject "Petroleum's Contribution to State and Local Governments."

BENTONITE PATENTS VALID

Claims of the Silica Products Co., relating to the use of Bentonite with cement, have recently been held valid and infringed by the U. S. Circuit Court of Appeals for the Eighth District in its decision affirming that of the District Court for the Western District of Missouri. The patent in question covers a method of waterproofing cement and concrete, wherein pulverized Bentonite is incorporated with the cement during mixing. The patent also covers the resulting waterproofed product. Defendants claimed that they did not use the Bentonite in the cement or concrete for waterproofing purposes but used it to obtain plasticity. The court, in handing down its decision, stated, however, that the purpose and intent of the defendants was immaterial as long as the product which they produced infringed the patent in question.

REDUCES WORK IN VENEZUELA

NEW YORK, May 2.—British Controlled Oilfields, Ltd., has materially curtailed its operations in Venezuela. A total footage of 21,594 feet was drilled during 1931, against 40,446 feet in 1930.

The company has entered into an agreement with Standard Oil Co. of Venezuela [Standard Oil Co. (New Jersey)] whereby the acreage held in the Orinoco Delta of Venezuela by Pedernales Oilfields, Ltd., and Tucupita Oilfields, Ltd., is being transferred to Standard of Venezuela, which will develop these blocks under a royalty agreement with British Controlled Oilfields, Ltd.

British Controlled Oilfields, Ltd., substantially widened its Trinidad operations last year through Trinidad Petroleum Development Co., Ltd., a wholly-owned subsidiary. Trinidad production for 1931 aggregated 1,459,717 bbls., against 817,150 bbls. in 1930.

DRILLING MOROCCAN WELLS

NEW YORK, May 2.—According to reports from Paris, M. Louis Pineau, director of the O.N.C.I., government oil body, is visiting Morocco, where favorable oil showings have recently been encountered. Two wells are being drilled in the Gharb under the direction of the O.N.C.I. and by a company in which that body and Compagnie Francaise des Petroles each hold a 25 per cent stock interest.

OIL MONOPOLY IN POLAND

A Warsaw, Poland, dispatch says President Ignacy Moscicki has issued a decree empowering the ministry of commerce to regulate production and marketing of oil in Poland and abroad. The ministry may establish prices, customs duties and an oil trust for exports. If producers do not establish such a trust within the next six months, the government will take the initiative. The decree is effective until 1937.

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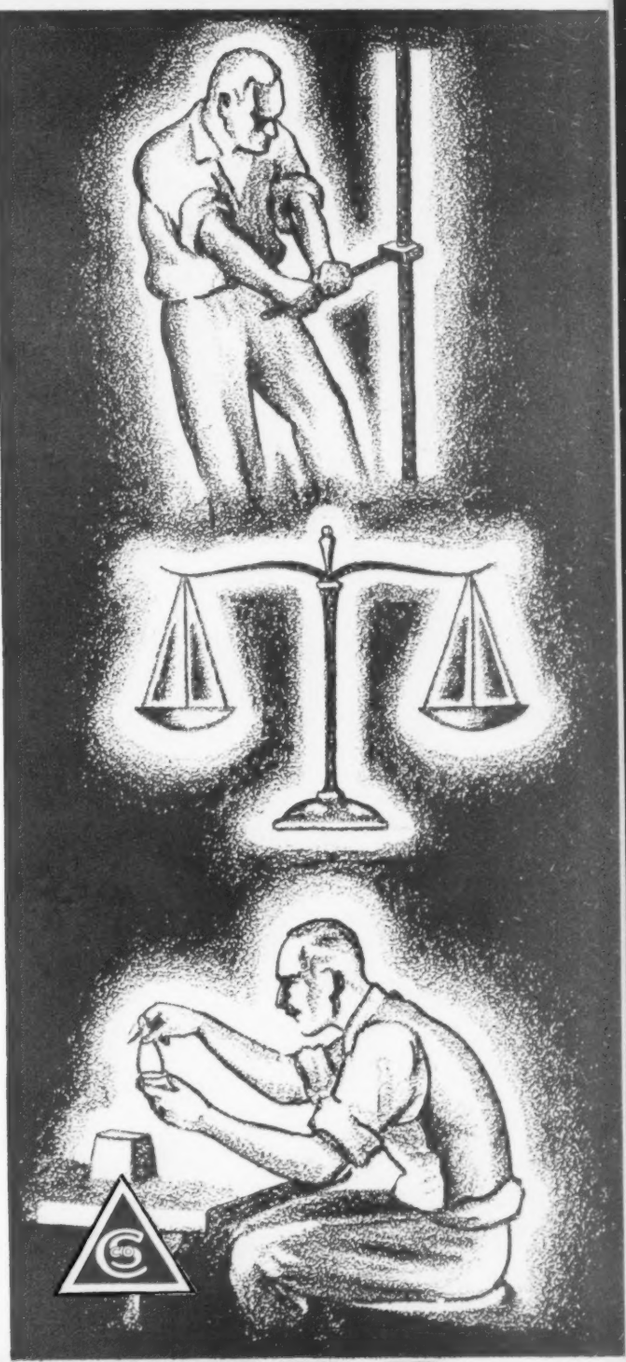

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New Allowable in East Texas District

Set at 61 Bbls. per Well or 320,000 Bbls. for the Field. New Locations Numbered 157 and Completions 136 During Week

By L. E. Bredberg

DALLAS, Tex., May 2.—A new daily per well allowable went into effect in the East Texas Field on May 1, the Railroad Commission bringing it down from 67 bbls. to 61 bbls. for the period from May 1 to 15, and to 59 bbls. after May 15. With the present number of completed producers this will curtail the field to around 320,000 bbls. per day. There are approximately 60 unconnected wells in the field, and only two companies, the Tidal Refining Co. and Sun Pipe Line Co., which are willing to connect to any more wells, the remaining purchasers in the field stating they are already connected to too many wells, some of them seeking to turn loose some of their connections. With 60 unconnected wells in the field, and 136 completed this week, and over 100 completed each week, the number of unconnected wells will increase each week, thereby raising the danger of considerable distress oil being thrown upon the market in the district, weakening the price structure which has looked fairly firm during the past three weeks.

However, distribution continues above production in the district, the seven-day period ending at 7 a.m. April 27 showing a daily average of 18,651 bbls. run from storage, or 353,545 bbls. daily distribution from the district, while production averaged only 334,894 bbls. Reduced takings by purchasers accounted for a decrease in daily production, over half of the purchasers having cut their own production and their purchases to 62 bbls. per well instead of the 67 bbls. as set by the Railroad Commission. Regardless of the purchasers stating that they cannot connect to any more wells in the district, they continue to take oil out of storage in the field, and it is the exceptional rather than the usual thing when production is greater than distribution in the district, and when oil is run to storage, rather than taken from it.

Locations and Completions

There were 157 locations staked in the district this week, 11 of which were wildcats. There were 136 completions reported. Thirty-six of the new locations were in northern Gregg County and 27 in southern Gregg. Southern Rusk County led in number of locations this week for the first time. Forty-seven were reported for that area, which will probably be the most active in the district for some time due to several wells having been completed extending the producing area in this part of the field, and less drilling having been carried on here than in other parts of the field. It will now come in for its share of drilling, just as northern and southern Gregg have during the past few months. Gregg County, however, will remain very active due to the extent of that part of the field and number of operators interested in acreage.

One wildcat location was reported for Ellis County, one for Franklin, one for Jasper, two for Marion, two for Morris, one for Polk and four for Upshur County. Marion County is now the most active and perhaps the most interesting wildcatting territory in the entire district, with three wells drilling and locations staked for two more.

Hearing on Meters

The Railroad Commission has sent out notice that a hearing will be held at the Baker Hotel, Dallas, Tuesday, May 10, at 10 a.m. to discuss the adoption of rules, regulations or orders for the prevention of waste of crude oil and natural gas in the East Texas oil field, especially the adoption of a requirement that meters be installed and operated on all pipe lines transporting crude oil to market or to local destination if movement is to refineries in the field, and for the further purpose of adopting rules, regulations or orders for the enforcement of the common carrier and common purchaser laws of the State, pertaining to crude oil and natural gas.

In the last order issued by the Railroad Commission in regard to the production of oil in East Texas a rule was adopted which requires every tank wagon driver to have a ticket showing the origin and destination of oil he is transporting for check by commission's supervisors in the field. Through this it is hoped to stop illegal shifting of oil and aid the State in collecting oil production and gasoline taxes.

Another rule provides for the recording of all oil taken out of tank bottoms and expressly stipulates that it should be calculated in the allowable. This is aimed at lease tanks flowing oil and not including it in the daily allowable.

The East Texas steel storage report, April 20, shows slightly over 2,916,000 bbls. in storage, with 7,127,940 bbls. room. This condition has prevailed practically all the time since the field was restored to normal in September, 1931.

Streambed Bids

The Sabine River Bed, which flows through the producing area in Gregg County, has been divided into eight tracts, all of which will be considered when proposals are received by the board of mineral development in Austin on May 16. These proposals will be (a) to lease for oil and gas; (b) or to drill for oil and gas; (c) or to purchase said minerals in place. Bids may be placed on one or more, or all of the eight tracts, and on one or all of the proposals.

More sales have taken place in the district during the week, the most important of which is the Cordova Union Oil Co.'s sale of 136 acres in the J. Lewis Survey, including eight wells, to the Tidal Oil Co. This acreage is in Rusk County, and constitutes the second purchase within three weeks. The company recently purchased three leases from the Danciger Oil & Refining Co., including seven producers, all located in Rusk County.

The M. B. G. Oil Co. purchased the Nash and Windfohr 108 acres, H. L. Griffin lease in the J. B. De Cadena Survey, and M. V. Pena Survey, western Rusk County, including two producing wells.

Byrd and others sold their 22.5-acre Watson lease in the J. S. Carruthers Survey, Gregg County, to Champlin and Bass for a reported consideration of $60,000 in cash and one-eighth overriding royalty. One completed well was included in the deal.

Field Operations

On the western side of the Kilgore area, the Brooks Petroleum Co.'s No. 1 Mayfield in the Daniel Clark Survey, is waiting for a standard rig after failing to flow. It topped the sand at 3,622 feet, and was drilled to a total depth of 3,702 feet. Elevation is 460 feet.

East Texas Refining Co.'s No. 1 Grisham in the Cordova Survey, Joiner area, Rusk County, an offset to Gulf Production Co.'s No. 7 Turner which has been showing salt water, topped the sand at minus 3,262 feet, and was shut down at 3,283 feet making 30 per cent water. It will probably be plugged back farther to shut off the water as first plugging back 10 feet reduced the water only 15 per cent.

Womack Oil Co.'s (J. Earl Brown) No. 1 J. G. Arnold in the William Christian Survey, extreme southern gas outpost in southern Rusk County, is still standing cemented. Total depth is 3,302 feet. It appeared as the heaviest gasser yet drilled in the area, when drill stem test was made last week.

Gas is being piped from two gas wells in this area to other leases in the area, and is being used for development, the drilling costs on wells using this gas being cut around $600 per well, the gas costing only 10 cents per 1,000 feet. Some gas is being sold at a flat rate of $750 per well, for the drilling of wells, which is far cheaper than crude oil fuel.

Joe Marr Drilling Co.'s No. 1 Lacy in the J. H. Sparks Survey, 1½ miles southwest of the Stanolind Oil & Gas Co.'s No. 1 Lacy gasser, Rusk County, will be the next interesting completion in this area. It is now rigging up, and may mean another extension, or prove the limits to the gas area.

The Em-Ark Drilling Co. has been formed by the Empire Gas & Fuel Co. and Arkansas Fuel Oil Co. to drill leases held by both companies. John Howell of Gladewater is vice president and general manager, and will be in charge of operations in the field. The company plans to maintain 20 active rigs on the leases.

Pitts and others have made an interesting location on the H. Davis farm in the W. R. Stephens Survey, approximately 1 mile northwest of Eslick's No. 1 Whitehurst producer, Upshur County. It is located between this producer and the McFarland No. 1 Starr, which has been standing shut down for some time, but which many expect to make a producer when it is drilled deeper. It is approximately 1 mile east of Cranfill & Reynolds' outpost producer in Upshur County.

Van Zandt County

A movement is under way to appeal to the courts to change the system of proration in the Van Field, this movement having been started by royalty owners in the field, claiming that the present system results in inequalities between royalty production on various leases.

The proration system was attacked before a recent meeting of the Railroad Commission on the field, but producers in the field favored the present proration system, and the commission ordered it retained. The projected attack is the first instance of royalty owners taking issue with proration orders in the courts.

Another dry hole was registered in the field this week when Pure Oil Co. abandoned its No. 1 D. F. Cade in the Nacogdoches County School Lands Survey, in the western part of the field. Total depth is 3,036 feet.

COMPLETIONS IN EAST TEXAS

North Gregg County

Amerada Petroleum Corp.'s No. 6 Hearne, top sand 3,514 feet, initial production 63 bbls. per hour through 1-inch tubing choke, total depth 3,524 feet; No. 6 Killingsworth, top sand 3,544 feet, initial production 121 bbls. per hour through tubing choke, total depth 3,574 feet. Arkansas Fuel Oil Co.'s No. 1-B S. G. Smith, top sand 3,505 feet, initial production 48 bbls. in 25 minutes through 1-inch tubing choke, total depth 3,514 feet; No. 2-B S. G. Smith, top sand 3,508 feet, initial production 67 bbls. per day through various chokes, total depth 3,530 feet. Atlantic Oil & Production Co.'s No. 3 S. S. Barton, top sand 3,566 feet, initial production 21 bbls. per hour through tapered tubing, total depth 3,691 feet; No. 6-A Burnside, top sand 3,518 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,545 feet. Atlantic and Wadley's No. 4 Turner Estate, top sand 3,560 feet, initial production 31 bbls. per hour through tapered tubing, total depth 3,624 feet.

Big Indian Oil Co.'s No. 1 W. R. Nicholson, top sand 3,659 feet, initial production 45 bbls. in 21 minutes through open tubing, total depth 3,672 feet. Black-Stroube and Collins' No. 3 J. Spurrier, top sand 3,509 feet, initial production 135 bbls. per hour through open tubing, total depth 3,520 feet. Burnett and others' No. 1 Claude Lee, top sand 3,651 feet, initial production 33 bbls. in one-fourth hour through three-fourths-inch tubing choke, total depth 3,684 feet. Continental Oil Co.'s No. 4 B. C. Todd, top sand 3,552 feet, initial production 260 bbls. per hour through open tubing, total depth 3,572 feet. Cox and Hammon's No. 6 fee, top sand 3,448 feet, initial production 140 bbls. per hour through open tubing, total depth 3,545 feet. Cranfill and Reynolds' No. 3 F. T. Rembert, top sand 3,475 feet, initial production 67 bbls. per day through various chokes, total depth 3,500 feet.

DAILY AVERAGE OIL SHIPMENTS FROM EAST TEXAS

Week Ending April 25

Company, size and location—	Amt.
Arkansas P. L. Corp., 8-in., Shreveport	13,145
Atlantic P. L. Co., 10-in., Atreco	15,286
Atlas P. L. Co., 8-in., Shreveport	5,262
Gulf P. L. Co., 2 and 8-in., Oklahoma	19,615
Gulf P. L. Co., 2 and 8-in., Port Arthur	12,493
Humble Pipe Line Co., 2 and 10-in., Shreveport	30,072
Humble P. L. Co., 2 and 8-in., Todd	34,417
Liberty P. L. Co., 8-in., Rusk	1,788
Magnolia P. L. Co., 10-in., Center	13,499
Magnolia P. L. Co., 12-in., Corsicana	30,845
Shell P. L. Corp., 10-in., Houston	25,451
Sinclair-Prairie Pipe Line Co., 12-in., Teague	19,759
Sun-Yount Lee P. L. Co., 10-in., Sun City	25,312
Texas P. L. Co., 10-in., Douglass	25,745
Texas Empire P. L. Co., 12-in., Port Arthur	49,344
Tidal Ref. Co., 6-in., Carthage	3,183
Total	335,210

SHIPMENTS TO REFINERIES

Arrow Ref. Co., Overton	S.D.
Beacon Ref. Co., Henderson	971
Boone Ref. Co., Arp	610
Central Ref. Co., Frairs Switch	S.D.
Constantin Ref. Co., Overton	S.D.
Diamond Ref. Co., Overton	473
East Texas Ref. Co., Longview	7,446
East Texas Ref. Co., Friars Switch	2,795
Gladetex Ref. Co., Gladewater	400
Gladewater Ref. Co., Gladewater	465
Guillory Ref. Co., Kilgore	90
Kilgore Ref. Co., Kilgore	750
Overton Ref. Co., Overton	852
Petroleum Refractionating Co., Longview	S.D.
Sinclair Ref. Co., Longview	1,111
Slack Ref. Co., Camp Switch	S.D.
Southern Oil Ref. Co., Reed Switch	380
Taylor Ref. Co., Tyler	770
V. O. E. Ref. Co., Gladewater	420
Total	17,533

TANK CAR SHIPMENTS

East Texas Ref. Co. from Longview	214
Cherokee Chief from Gladewater	501
Total	715
Total daily average distribution	353,458
Total daily average production	344,815
Daily average from storage	18,639

Empire Gas and Fuel Oil Co.'s No. 4 J. Bauder, top sand 3,563 feet, initial production 35 bbls. in one-fourth hour through open tubing, total depth 3,640 feet; No. 7 L. A. Jeter, top sand 3,572 feet, initial production 37 bbls. in one-fourth hour through open tubing, total depth 3,614 feet. Fain and McGaha's No. 4 A. Tooke, top sand 3,590 feet, initial production 120 bbls. per hour through 1-inch tubing choke, total depth 3,636 feet. Faith Oil Co.'s No. 3 B. B. Fenton, top sand 3,698 feet, initial production 30 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,710 feet; No. 2 J. C. Barrett, top sand 3,672 feet, initial production 5 bbls. in five minutes through tubing choke, total depth 3,700 feet. Fleming and Kimbell's No. 3 J. Barnes, top sand 3,658 feet, initial production 67 bbls. in 24 hours

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through various chokes, total depth 3,688 feet.

Galvez Oil Co.'s No. 4 W. W. Holland, top sand 3,592 feet, initial production 67 bbls. per day through various chokes, total depth 3,604 feet. Gulf Production Co.'s No. 2 A. V. Bacle, top sand 3,605 feet, initial production 70 bbls. per hour through three-fourths-inch tubing choke, total depth 3,631 feet. H. B. & W. Oil Co.'s No. 2 J. C. Grey, top sand 3,585 feet, initial production 32 bbls. in one-half hour through open tubing, total depth 3,620 feet. Heyser and Heard's No. 3 Guy and Hindman, top sand 3,613 feet, initial production 67 bbls. per day through various chokes, total depth 3,683 feet. F. C. Jones and others' No. 1 J. M. Christian, top sand 3,545 feet, initial production 67 bbls. per day through various chokes, total depth 3,595 feet. Larry and Hall's No. 1 J. H. Alexander, top sand 3,549 feet, initial production 55 bbls. per hour through open tubing, total depth 3,592 feet. Lucey Petroleum Corp.'s No. 3 J. H. McHaney, top sand 3,535 feet, initial production 67 bbls. per day through various chokes, total depth 3,563 feet.

Magnolia Petroleum Co.'s No. 7 R. B. White, top sand 3,508 feet, initial production 208 bbls. per hour through open tubing, total depth 3,530 feet. Roeser and Pendleton's No. 2 J. T. Hopkins, top sand 3,523 feet, initial production 67 bbls. per day through various chokes, total depth 3,545 feet. Selby and Lewis' No. 7 L. C. Ingram, top sand 3,500 feet, initial production 48 bbls. in one-quarter hour through 1-inch tubing choke, total depth 3,545 feet. Shasta Oil Co.'s No. 5-A Campbell, top sand 3,614 feet, initial production 67 bbls. per day through various chokes, total depth 3,674 feet. Shell Petroleum Corp.'s No. 5 J. Moore, top sand 3,524 feet, initial production 30 bbls. per hour through tapered tubing, total depth 3,559 feet. Silver Star Oil Co.'s No. 1 Finley and Thomas, top sand 3,508 feet, initial production 67 bbls. in one-half hour through tubing choke, total depth 3,532 feet; No. 1 Pine Hill School, top sand 3,565 feet, initial production 67 bbls. per day through various chokes, total depth 3,595 feet. Sinclair-Prairie Oil Co.'s No. 21 Moncrief, top sand 3,571 feet, initial production 48 bbls. in one-quarter hour through open tubing, total depth 3,601 feet. H. R. Smith, Inc.'s No. 5 W. H. Bauknight, top sand 3,544 feet, initial production 180 bbls. per hour through 1¼-inch tubing choke, total depth 3,610 feet.

Stanolind Oil & Gas Co.'s No. 3 Cox and Hammon, top sand 3,454 feet, initial production 188 bbls. per hour through open tubing, total depth 3,501 feet; No. 4-C M. B. Harley, top sand 3,600 feet, initial production 67 bbls. in 23 minutes through open tubing, total depth 3,665 feet. Stanolind and Simms Oil Co.'s No. 3 Percy McGeorge, top sand 3,458 feet, initial production 78 bbls. per hour through open tubing, total depth 3,506 feet. Stanolind and others' No. 4 H. Key, top sand 3,501 feet, initial production 189 bbls. per hour through open tubing, total depth 3,585 feet. Stroube and Stroube's No. 1 Dollie Key, top sand 3,515 feet, initial production 67 bbls. in one-half hour through tubing choke, total depth 3,530 feet. Yount Lee Oil Co.'s No. 3-C Maude Smith, top sand 3,480 feet, initial production 79 bbls. per hour through eleven-sixteenths-inch tubing choke, total depth 3,500 feet.

South Gregg County

Producers Investment Co.'s No. 1 W. N. Crim, top sand 3,560 feet, initial production 50 bbls. per hour through open tubing, total depth 3,600 feet. Atlantic-Byrd-Frost's No. 4 Smith, top sand 3,551 feet, initial production 22 bbls. per hour through tapered tubing, total depth 3,571 feet. Bay Oil Corp.'s No. 2 Smith, top sand 3,535 feet, initial production 40 bbls. per hour through 1-inch tubing choke on 2-inch tubing, total depth 3,655 feet. Choctaw Oil Co.'s No. 2 Elder, top sand 3,539 feet, initial production 20 bbls. in one-quarter hour through three-quarters-inch tubing choke, total depth 3,589 feet. Wainwright-West, Ltd.'s No. 1 J. Martin, top sand 3,743 feet, initial production estimated 100 bbls. per hour through open tubing, total depth 3,745 feet. Bessie DeMayo's No. 3 Benson, top sand 3,747 feet, initial production 120 bbls. per hour through 1-inch tubing choke on tubing, total depth 3,750 feet.

Gulf Production Co.'s No. 8 Alexandria, top sand 3,521 feet, initial production 90 bbls. per hour through three-quarters-inch tubing choke, total depth 3,535 feet; No. 19 Hilburn Estate, top sand 3,549 feet, initial production 85 bbls. per hour through three-quarters-inch tubing choke, total depth 3,564 feet; No. 7 Holt, top sand 3,580 feet, initial production 100 bbls. per hour through three-quarters-inch tubing choke, total depth 3,595 feet; No. 3 A. A. King, top sand 3,553 feet, initial production 75 bbls. per hour through three-quarters-inch tubing choke, total depth 3,580 feet; No. 12 Spear, top sand 3,523 feet, initial production 90 bbls. per hour through three-quarters-inch tubing choke, total depth 3,538 feet; No. 15 A. Spear, top sand 3,592 feet, initial production 82 bbls. per hour through three-quarters-inch tubing choke, total depth 3,600 feet; No. 2 E. L. Walker, top sand 3,531 feet, initial production 70 bbls. per hour through three-quarters-inch tubing choke, total depth 3,562 feet.

Hasting and others' No. 1 Wallace, top sand 3,540 feet, initial production 60 bbls. in one-half hour through open tubing, total depth 3,586 feet. Henry Oil Co.'s No. 3 Ben Laird, top sand 3,518 feet, initial production 20 bbls. in 12 minutes through three-quarters-inch tubing choke, total depth 3,601 feet. Iowa Payne's No. 1 Jim Gray, top sand 3,689 feet, initial production 115 bbls. per hour through three-quarters-inch tubing choke, total depth 3,701 feet. Jones and O'Brien's No. 4 Hughey-Ross, top sand 3,521 feet, initial production 20 bbls. in one-quarter hour through open tubing, total depth 3,571 feet. Dale Sneed's No. 1 J. F. Reynolds, top sand 3,542 feet, initial production 20 bbls. in one-half hour through three-quarters-inch tubing choke, total depth 3,626 feet.

Shell Petroleum Corp.'s No. 1 Donnie Carr, top sand 3,434 feet, initial production 7½ bbls. in one-quarter hour through tapered tubing, total depth 3,511 feet. Sinclair-Prairie Oil Co.'s No. 15-A A. A. King, top sand 3,480 feet, initial production 60 bbls. in one-quarter hour through open tubing, total depth 3,512 feet; No. 2-B A. A. King, top sand 3,441 feet, initial production 50 bbls. in one-quarter hour through open tubing, total depth 3,465 feet. Sun Oil Co.'s No. 2 William Penecost, top sand 3,583 feet, initial production 51 bbls. per hour through tapered tubing, total depth 3,631 feet. The Texas Company's No. 4 R. B. Walls, top sand 3,675 feet, initial production 162 bbls. per hour through open tubing, total depth 3,684 feet. Weaver-Crim Corp.'s No. 5 Laird, top sand 3,560 feet, initial production 62 bbls. per day through pinched tubing, total depth 3,589 feet.

North Rusk County

Abercrombie and Harrison's No. 2-A Brightwell, top sand 3,659 feet, initial production 65 bbls. in 30 minutes through 1½-inch tubing choke, total depth 3,685 feet. Bay Oil Corp.'s No. 5 D. M. Peterson, top sand 3,612 feet, initial production 45 bbls. per hour through three-fourths inch tubing choke, total depth 3,685 feet. Beard and Hammon's No. 1 H. Alexander, top sand 3,602 feet, initial production 67 bbls. in 40 minutes through 2½-inch tubing choke, total depth 3,665 feet. Mills Bennett, Inc.'s No. 9 Brightwell, top sand 3,660 feet, initial production 15 bbls. in 15 minutes through 1-inch tubing choke, total depth 3,710 feet.

Devonian Oil Co. and Gulf Production Co.'s No. 13 Motley, top sand 3,732 feet, initial production 115 bbls. per hour through three-fourths inch tubing choke, total depth 3,740 feet. Empire Gas & Fuel Oil Co.'s No. 8 C. O. Christian, top sand 3,704 feet, initial production 20 bbls. in 15 minutes through 2-inch tubing choke on 2½-inch tubing, total depth 3,721 feet; No. 5 Leverett, top sand 3,720 feet, initial production 46 bbls. in 1¼ hours through 2-inch tubing, total depth 3,755 feet. Everets Drilling Co.'s No. 1 Night and Tabor, top sand 3,624 feet, initial production pumping 62 bbls. per day, total depth 3,766 feet. Golding and Murchinson's No. 2 Brock estate, top sand 3,635 feet, initial production 80 bbls. in one hour through one-half inch tubing choke, total depth 3,657 feet.

Humble Oil & Refining Co.'s No. 16-B S. S. Laird, top sand 3,542 feet, initial production 40 bbls. in 30 minutes through 1-inch tubing choke, total depth 3,623 feet; No. 2 J. E. Reed, top sand 3,639 feet, initial production 52 bbls. per hour through three-fourths inch tubing choke, total depth 3,744 feet. Lewis Production Co. and Selby Oil & Gas Co.'s No. 3 D. Wills, top sand 3,640 feet, initial production 67 bbls. per day pinched through tubing, total depth 3,652 feet. Shell Petroleum Corp.'s No. 1-B T. Wells, top sand 3,674 feet, initial production 45 bbls. in 14 hours pumping, total depth 3,774 feet. Turman Oil Co.'s No. 6-B Brightwell, top sand 3,608 feet, initial production 60 bbls. in 15 minutes through open tubing, total depth 3,618 feet.

South Rusk County

Aston Oil Co.'s No. 4 J. R. Alford, top sand 3,600 feet, initial production 70 bbls. per hour through open tubing, total depth 3,656 feet. Champlin and Bass' No. 2 Grissom, top sand 3,661 feet, initial production 48 bbls. in 30 minutes through open 2½-inch tubing, total depth 3,666 feet. Jim Cloud's No. 4 W. F. Neal, top sand 3,811 feet, initial production 81 bbls. in 10 minutes through casing and 1-inch tubing on 2½-inch tubing, total depth 3,816 feet; No. 3 Samp Stone, junked and abandoned, total depth 2,830 feet. Combined Oil Interest's No. 7 G. W. Eaton, top sand 3,766 feet, initial production 25 bbls. in 15 minutes through open tubing, total depth 3,777 feet. R. W. Fair's No. 3 Fair fee, top sand 3,648 feet, initial production 66 bbls. in 35 minutes through open 2-inch tubing, total depth 3,656 feet.

Golding and Murchinson's No. 2 J. E. Arnold, top sand 3,644 feet, initial production 67 bbls. per day pinched through tubing, total depth 3,735 feet. Gulf Production Co.'s No. 6 T. B. Cashen, top sand 3,766 feet, initial production 82 bbls. per hour through three-fourths inch tubing choke, total depth 3,776 feet; No. 3 Hoxie Johnson, top sand 3,787 feet, initial production 80 bbls. per hour through three-fourths inch tubing choke, total depth 3,796 feet; No. 3-C Mayfield, top sand 3,648 feet, initial production 50 bbls. per hour through three-fourths inch tubing choke, total depth 3,656 feet. Hale and Hatchfield's No. 1 C. J. Goforth, temporarily abandoned.

Humble Oil & Refining Co.'s No. 2 R. T. Cameron, top sand 3,587 feet, initial production 41 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,695 feet; No. 4-B Kangerga, top sand 3,613 feet, initial production 49 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,634 feet; No. 10 W. L. Price, top sand 3,714 feet, initial production 35 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,766 feet; No. 12 W. L. Price, top sand 3,642 feet, initial production 41 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,745 feet; No. 6-A J. H. Silvey, top sand 3,696 feet, initial production 58 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,712 feet; No. 7½-A R. E. L. Silvey, top sand 3,678 feet, initial production 47 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,739 feet; No. 2 J. E. B. Sneed, top sand 3,672 feet, initial production 57 bbls. in 30 minutes through three-fourths inch tubing choke, total depth 3,706 feet. H. L. Hunt's No. 5-A H. C. Maxwell, top sand 3,770 feet, initial production 60 bbls. in 30 minutes through open tubing, total depth 3,803 feet; No. 2 Ras Pool, top sand 3,727 feet, initial production 70 bbls. per hour through open 2-inch tubing, total depth 3,804 feet; No. 2 A. Reed, top sand 3,638 feet, initial production 40 bbls. per hour through open tubing, total depth 3,677 feet.

Mid-Kansas Oil & Gas Co.'s No. 2 H. C. and C. W. Burton, top sand 3,642 feet, initial production 80 bbls. per hour through 2½-inch tubing with 2-inch lead based on 15-minute gauge, total depth 3,675 feet; No. 3 M. M. Cross, top sand 3,630 feet, initial production 80 bbls. per hour through 2½-inch tubing choke, with 2-inch lead, total depth 3,664 feet; No. 6 J. F. Mason, top sand 3,613 feet, initial production 80 bbls. per hour through 2½-inch tubing choke on 2-inch lead, total depth 3,641 feet; No. 2 L. B. Rollins, top sand 3,605 feet, initial production 60 bbls. per hour through open 2½-inch tubing on 2-inch lead, total depth 3,630 feet. Mullins and Strickland's No. 1 Brewer Cemetery, top sand 3,577 feet, initial production 36 bbls. one-half hour through open 2½-inch tubing choke, total depth 3,669 feet. Ralph R. Ogden's No. 2 Jobe, top sand 3,616 feet, initial production 40 bbls. per hour through open 2-inch tubing, total depth 3,659 feet. Frank W. Roe and others' No. 1 B. F. Maxwell, temporarily abandoned.

Roeser and Pendleton's No. 3 Glenn Pool, temporarily abandoned; No. 5 Ras Pool, temporarily abandoned. Shasta Oil Co.'s No. 2 Ras Pool, top sand 3,676 feet, initial production 65 bbls. per hour through open tubing, total depth 3,730 feet. Sinclair-Prairie Oil Co.'s No. 2 D. Ledbetter, top sand 3,583 feet, initial production 40 bbls. in one-fourth hour through open tubing, total depth 3,600

(Continued on Page 52)

EAST AND EAST CENTRAL TEXAS WILDCATS

Week Ending May 2

ANDERSON COUNTY

Company, well, farm name, section and block—	Remarks:
Roeser and Pendleton's No. 1 M. A. Davy, 660 ft. from N line and center of E and W lines of tract and survey, P. G. Adams Sur.	Moving in material.
C. R. Wilmuth et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in S½ of 129-ac. tract, M. Main Sur.	T.D. 1,538 ft.

ANGELINA COUNTY

Helburt et al's No. 1 Long Bell Lumber Co., 160 ft. from S line and 200 ft. from E line of Sec. 9, H.&T.B. Sur.	Location.

BOWIE COUNTY

Burnham-Robertson and Greer's No. 1 F. O. Weiss, 850 ft. from N line and 200 ft. from W line of B. H. Williams 50-ac. tract, Jessie Dean Sur.	Drlg. 2,010 ft.

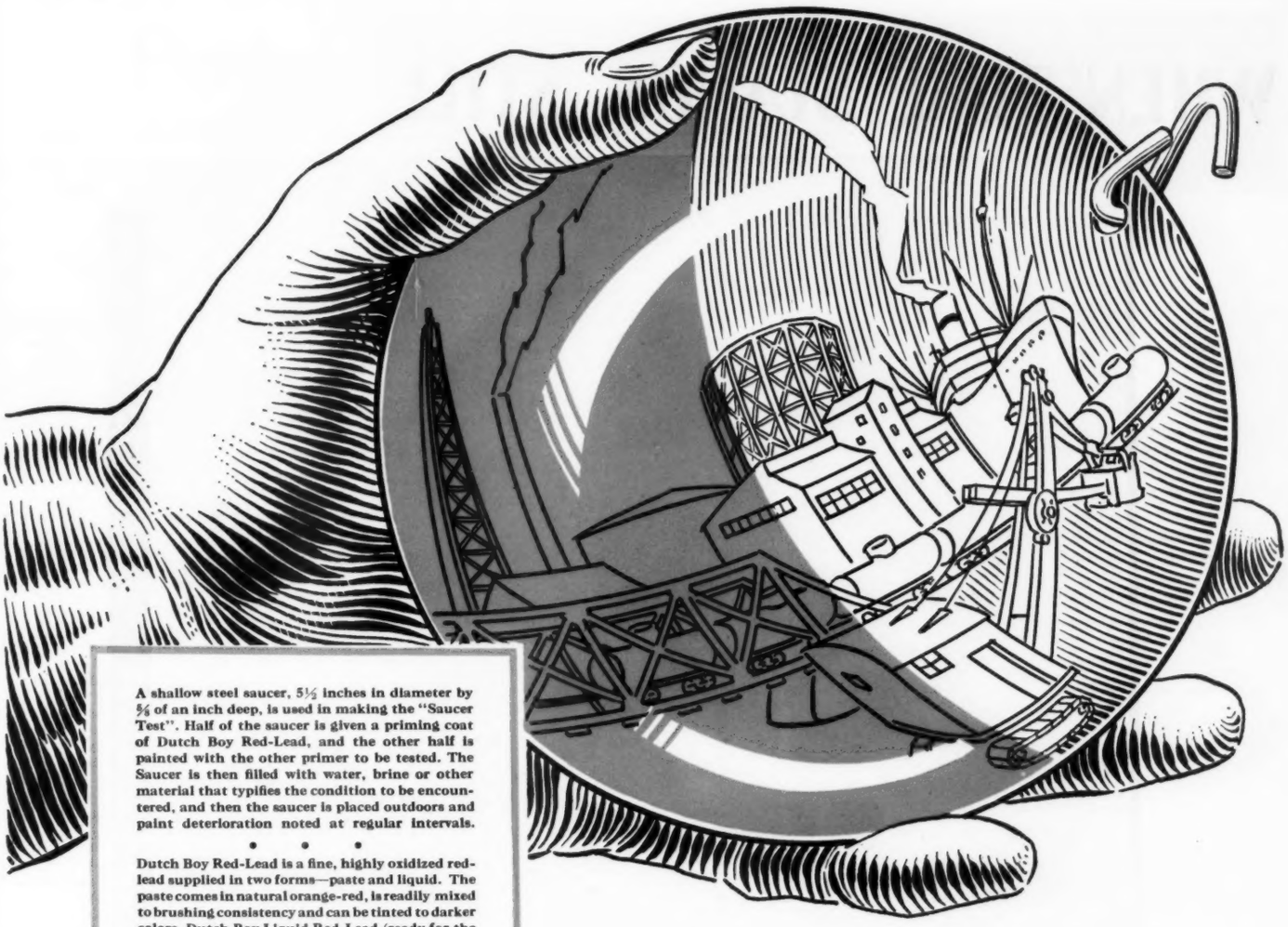
CHEROKEE COUNTY

Bridges and Candler's No. 1 Berryman, center of Berryman tract, H. Kimble Sur.	S.D. 1,000 ft.
Harper and Perkinson's No. 1 J. T. Lowery, 650 ft. from N line, 150 ft. from W line of Blk. No. 5 on a 139.6-ac. tract, 4 miles W of Troupe, C. B. Jennings Sur.	S.D. 3,366 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 H. D. Kelley, 330 ft. from S line and 537 ft. from E line of lease, M. De Los Santos Sur.	Drlg. 2,815 ft.
Mid-Kansas Oil & Gas Co.'s No. 9 M. M. Cross, 1,540 ft. from N line of Cherokee County and 537 ft. from W line of lease, Fowlks Sur.	Drlg. 3,060 ft.
Mustang Oil Co.'s No. 1 Decker and Whiteman, east side of W 75 acres of S 150 acres of survey, 3 miles S of Maydelle, F. W. Fulgham Sur.	Waiting on cmt. to set 290 ft.
Dr. Tubbs et al's No. 1 J. H. Sharp, 330 ft. from N line and 71 ft. from E and W lines of 3½-ac. tract, M. De Los Santos Coy Sur.	Rig up.
Wilson & Stubbs' No. 1 L. Robert, 450 ft. from S and 150 ft. from W line of lease, J. B. Wolfin Sur.	S.D. 2,035 ft.; will skid derrick.

DALLAS COUNTY

Long Creek Dev. Co.'s No. 1 T. J. Lupton, center of 160-ac. tract, 3½ miles N of Mesquite, J. Johnson Sur.	Rig up.

(Continued on Page 49)



A shallow steel saucer, 5½ inches in diameter by 5/8 of an inch deep, is used in making the "Saucer Test". Half of the saucer is given a priming coat of Dutch Boy Red-Lead, and the other half is painted with the other primer to be tested. The Saucer is then filled with water, brine or other material that typifies the condition to be encountered, and then the saucer is placed outdoors and paint deterioration noted at regular intervals.

• • •

Dutch Boy Red-Lead is a fine, highly oxidized red-lead supplied in two forms—paste and liquid. The paste comes in natural orange-red, is readily mixed to brushing consistency and can be tinted to darker colors. Dutch Boy Liquid Red-Lead (ready for the brush) is available in the natural orange-red, two shades each of brown and green, and also in black.

READ...

THE FUTURE OF YOUR PROPERTY IN THE RESULTS OF YOUR OWN "SAUCER TEST"

Learn how Red-Lead seals out rust and retards depreciation of metal structures!

● If you want to see what the years hold in store for your iron and steel structures... if you want to know how pure red-lead will give them maximum protection against rust and depreciation... make the "Saucer Test" for paint durability.

The "Saucer Test" was developed by the engineers of a large southern railroad, who were seeking a practical method for testing the durability of priming paints for metal.

The "Saucer Test" enables you to compare wearing qualities of paints for metal under corrosive conditions which correspond to those attacking your metal property. Railroads, for example, use cinders and water in the saucer to reproduce the sulphuric acid reaction that takes place when locomotive cinders and moisture collect in bridge pockets and angles. With a brine solution you can test the durability of primers used on iron and steel exposed to salt air and sea water. Use any mixture which approximates the corrosive conditions to which your metal structures are exposed.

The "Saucer Test" has been applied to scores of metal protecting paints by the railroad which originated this practical trial method. In all these tests, pure red-lead has outlasted every other primer by 4 to 1, or longer. In tests made by other users, proof of red-lead's greater stamina has been equally convincing!

If you'd like to make the "Saucer Test"... if you'd like to see for yourself how Dutch Boy Red-Lead will protect your metal structures... just send for the "Saucer Test" kit. It contains a testing saucer and a sample of Dutch Boy Red-Lead ready for the brush, with instructions for making the test. Please send your request on your company letterhead.

LITHARGE of correct physical character and extreme chemical purity is a necessity in oil-refining. Such litharge is made by the makers of Dutch Boy Red-Lead and Dutch Boy White-Lead. You can always rely on its unvarying uniformity. Our nearest warehouse can give you quick shipment.

NATIONAL LEAD COMPANY

111 Broadway, New York; 116 Oak Street, Buffalo; 900 West Eighteenth Street, Chicago; 659 Freeman Avenue, Cincinnati; 820 West Superior Avenue, Cleveland; 722 Chestnut Street, St. Louis; 2240 Twenty-fourth Street, San Francisco; National-Boston Lead Co., 800 Albany Street, Boston; National Lead & Oil Co. of Pa., 316 Fourth Avenue, Pittsburgh; John T. Lewis & Bros. Co., Widener Bldg., Philadelphia.

DUTCH BOY RED-LEAD

WHEN TIME STANDS STILL

THE corrosion and ultimate failure of an unprotected pipe line is merely a matter of years. When pipe is protected with *Bitumastic Enamel*, however, time is held back. Depreciation figures are reduced. Serviceability is maintained. Reconditioning costs are negligible.

More Bitumastic has been used than any other pipe coating. Every year, for the past five years, our sales for gas lines have far exceeded those of any other pipe coating manufacturer. It is probable that, over this period, more Bitumastic has been sold than all other manufactured pipe coatings put together*

This volume refers not only to tonnage of material but to mileage of pipe lines of equivalent diameter.

*Mill applied lacquers and varnishes excepted.

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Pipe Line Construction News

AWARD MORE CONTRACTS FOR IRAQ PIPE LINE

It appears, says the London Petroleum Times, that no time is to be lost by the Iraq Petroleum Co., Ltd., in connection with the fulfilment of its obligations with the Iraq government for the construction of the pipe line from Kirkuk to Haifa via Haditha, which is the British section of the line. The company is reported making numerous inquiries for the supply of large-scale equipment. Most of this equipment is necessarily the type required before the actual operations with regard to the construction of the pipe line can be commenced.

Among the first equipment to be required is that connected with housing and transport. Inquiries are also out for telegraph and telephone systems along the proposed route of the pipe line, as well as for transport trucks; some of these trucks have actually been ordered.

The Iraq Petroleum Co., it is understood, has begun to place contracts for the pipe line across Iraq and Palestine to two ports on the Mediterranean. The distance will be from 1,200 to 1,300 miles and the pipe line, beginning at Kirkuk, in Iraq, will be laid to Haditha, whence it will fork, one section being carried through the British mandated territory of Palestine to Haifa, and the other through the French mandated area of Syria to the port of Tripoli. It is understood that some 150,000 tons of steel pipe will be required.

Stewarts and Lloyds, Ltd., of London, whose works are in Birmingham and Glasgow, have stated they had already secured the contract for 350 miles of 12-inch seamless steel pipe, about 50,000 tons, and expect shortly to receive further orders, bringing this up to about 400 miles. The tonnage was divided between Stewarts & Lloyds, Ltd., the British Mannesmann Tube Co., Ltd., and French and German pipe mills. Deliveries of pipe will commence in six weeks' time, and the mills have already commenced rolling the pipe. The order is the largest ever placed for pipe in Europe, and must represent over £1,500,000.

For the larger pipe line, France has been given 49 per cent, England 35 per cent, and 16 per cent has gone to Germany, but the 10-inch pipe contract has gone to the United States and Germany. The 12-inch pipe will run from the fields over the mountainous ranges toward the coast, but the pressures on the oil will be so great that the engineers have thought it advisable that when the line comes to the low lands it shall be continued with two 10-inch pipes; hence the contracts for the smaller diameter pipe. This contract has gone to American, English and German pipe mills. Contracts for American and German mills were negotiated by the Oil Well Engineering Co., Ltd., of London.

Further important contracts have yet to be placed on a similarly large scale, and these will include the supply of pumps, engines, valves, tanks, etc., which contracts will be placed in due course. Contract has been placed for 4,000 miles of copper telegraphic and telephone wires with a British firm.

Orders have been placed with British firms for the erection of 60 temporary buildings, including a hospital and garages, for use along the route of the pipe line, and also to British and French firms for the supply of motor transport vehicles. The terms of the concession, which is for 75 years, stipulate that the Iraq Petroleum Co. shall complete the pipe line to the Mediterranean by the end of 1935.

It is understood that deliveries of the pipe are to be spread over nine months. Meanwhile, the Iraq Petroleum Co. is pressing forward with its organization at the terminal port of Haifa, and several new appointments have recently been made in this connection.

HEARING TO BE HELD ON METERS ON PIPE LINES

AUSTIN, Tex., May 2.—Chairman C. V. Terrell, of the Texas Railroad Commission, has announced that a hearing will be held soon to determine the practicability of placing meters on pipe lines in the East Texas Field. This announcement followed recommendations on behalf of producers and royalty owners that such an order should be entered summarily, and suggestions by Gen. Jacob F. Wolters of The Texas Company and C. F. Roeser, Fort Worth, that hearings should determine whether meters can be used accurately to gauge the oil.

STANOLIND PIPE LINE

RANGER, Tex., May 2.—Installation of a 300-horsepower engine and a pump at Stanolind Pipe Line Co.'s Ranger station will enable that company to move oil directly to its Graford station, rather than using Humble Pipe Line Co.'s facilities. The work will involve expenditure of approximately $15,000 by Stanolind.

Recently Stanolind Pipe Line Co. made arrangements to move Winkler County oil produced by Stanolind Oil & Gas Co. to Graford station through Humble Pipe Line facilities. Formerly the oil was moved by tank car.

NEW GAS AND OIL LINES

J. F. Pritchard & Co. of Tulsa are finishing construction of 25 miles of 4-inch pipe line from Burrton, Kans., to Valley Center for the Derby Petroleum Co. The same company is constructing 7 miles of 3-inch lateral gas lines and a new distribution system for the Northern Gas Engineering Co. at Forest City, Iowa.

EAST TEXAS PIPE LINE COMMITTEE TO DALLAS

The East Texas Pipe Line Committee, which has been functioning for the past few months, meeting each week in Kilgore to discuss the pipe line situation and work out connections for newly completed wells in the district, has changed its meeting place to Dallas, and will convene there twice each month, near the first and fifteenth.

John G. Pew, of the Sun Oil Co., was retained as president of the committee, and George W. Goad, of the Tidal Refining Co., was named secretary.

Members of the committee are: E. L. Caster, Arkansas Pipe Line Co., Shreveport, La.; W. M. Irish, Atlantic Oil Producing Co., Dallas; W. C. Liesk, Atlas Pipe Line Co., Shreveport; F. W. Burford, East Texas Refining Co., Dallas; A. N. Horne, Bartlesville, Okla., and N. Y. Moore, Gladewater, both with Empire Pipe Line Co.; N. H. Perry, of Houston and J. C. Hanrahan, of Longview, and J. A. Neath, Houston, all with Humble Pipe Line Co.; H. B. May, Inland Waterways Pipe Line Co., Fort Worth, Tex.; T. J. Fitch, Dallas, and J. T. Clark, Longview, both with Magnolia Pipe Line Co.; H. L. Hunt, Panola Pipe Line Co., Tyler, Tex.; L. H. Gray, Southern Oil & Refining Co., Tyler; B. C. Clardy, Shell Petroleum Corp., Dallas; F. R. Schneider, Simms Oil Co., Dallas; E. V. Marlow, Tulsa, and Lee Adams, Tyler, Sinclair-Prairie Pipe Line Co.; Dan L. Mahoney, Stanolind Crude Oil Purchasing Co., Fort Worth; A. M. Donaghue, Houston; J. B. Alleman, Henderson, and W. A. May, Tyler, all with the Texas Pipe Line Co.; C. R. Barton, Tulsa, and George W. Goad, Tyler, both with Tidal Refining Co.; and C. M. Bryson, Toronto Pipe Line Co., Tyler.

Motor driven centrifugal pumps in Sinclair-Texas Pipe Line Co.'s station at Troup, Texas.

Tenth Deep Test at Big Lake Ready

Considerable Leasing in Northwest Reagan and Sterling Counties. Two Producers Completed in Loving County

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., May 2.—The tenth deep producing well of the Big Lake Field, Reagan County, is ready to be tested at around 8,350 feet in lime, in the first of the world's deepest oil producing horizons. This test is Big Lake Oil Co.'s No. 6-C University, and is located in Section 12, Block 2. There are two other tests in the field building derrick, and rig foundations. Extra heavy foundations have to be constructed for these tests due to the heavy equipment used, and the stress placed on the equipment and foundations in drilling, and by the gas pressure after the wells are completed. Cost of drilling is consequently more, but the higher gravity oil brings greater returns, and wells may be produced from two pay horizons at the same time, one producing a higher gravity oil than the other, producing through the tubing, while the second pay horizon produces a lower gravity oil, through the casing. One other well is to be equipped with a "shoe" in the bottom of the hole to separate the two pay horizons, and facilitate the producing of the two gravity oils, one through the tubing, the other through the casing.

Andrews Wildcat

Fuhrman Petroleum Co.'s No. 1 W. S. Boner, wildcat test in Andrews County, Section 24, Block A-43, encountered an increase in gas at 4,225-30 feet, and a trace of oil showed in cutting caught from 4,254-69 feet. It is drilling at 4,285 feet in lime. The test is in the vicinity of the company's No. 1 Ford which is a small producer, standing without pipe line connections. The Boner test has another 100 feet to go before picking up the first oil pay topped in the Ford well. Elevation of the test is 3,196 feet. It encountered its first gas at 4,145-55 feet, picking up an estimated 50,000 to 100,000 feet. The increase showed an estimated 500,000 feet of gas.

Loving County

Two more producers were added to Loving County during the week. These were William H. Little's No. 1 H. Freels in Section 92, Block 1, W.&N.W. Survey, and Reagan and McElvain's No. 2 Bowen & Wells in Section 92. The former test was shot with 150 quarts, cleaned itself, and made 127 bbls. in 13 hours. The latter test was shot with 180 quarts and flowed 94 bbls. the first 24 hours, then flowed an average of 60 bbls. daily while cleaning out. Total depth is 4,301 feet, and top of sand was logged at 4,288 feet.

Pecos County

Easter Oil Co.'s No. 4 Tippett in Section 40, Block 194, G.C.&S.F. Survey, in the Toborg-Tippett Pool, Pecos County, which was formerly plugged back from 520 feet after showing all water, to 482 feet to complete for a producer in the shallow pay found in this pool, has been deepened to 1,330 feet and is heading every two hours at the rate of 65 bbls. per day. It encountered an oil show at 1,200 feet, some gas at 1,286 feet, and heavier oil pay from 1,290-95 feet, and a second increase in gas and oil at 1,318 feet. It is appearing as the first deep producer in this shallow pool, and may lead the way to deeper drilling in some, if not all of the shallow producers. Tubing will be run and a test made. A shot may be given the well to increase production.

Reeves County

Rita Oil Corp. has erected a steel derrick on its No. 1 Wright in Section 58, Cassel's Survey, west of Toyah, Reeves County, and the test will be deepened from 75 feet where it has been standing shut down. It was spudded by the Southern Star Oil Co.

Ector County

Broderick and Calvert of Fort Worth are preparing to drill a test in the northwest corner of Section 15, Block 44, Township 2s, T.&P. Survey, Ector County. This location is approximately 7 miles north of production in the Penn Pool.

Reagan County

There has been considerable leasing in the northwestern part of Reagan County, southwest of the town of Stiles, and a test may be expected in this area in the future. The Honolulu Oil Co. has taken acreage in Block 37, Township 5s, T.&P. Survey, Shell Petroleum Corp. has taken acreage 3 miles southeast of Stiles, and Gulf Production Co. has taken leases in Block L, T.C. Survey, and Blocks F, E and G in T.P. Survey.

Atlantic Oil Producing Co. has re-entered Regan County with seismograph crews, working along an east and west line, passing through the Big Lake Field.

Sterling County

There continues to be some leasing taking place in Sterling County. The California Co. is reported taking leases in Blocks 12 and 14, S.P. Ry. Survey, and Shell Petroleum Corp. is buying in Blocks 12, S.P. Survey, and 22 in the H.&T.C. Survey.

Western Crockett

The Texas Company is expected to spud a test this week on location in Section 36½, I.&G.N. Survey, on the B. B. Ingham ranch in western Crockett County. It is scheduled to go to 4,500 feet unless production is obtained. The company has leases on approximately 10,000 acres surrounding the well, the leases expiring unless test is spudded immediately, or an extension is secured. The location is approximately 20 miles southeast of the Yates Field, and 2.5 miles south of old Fort Lancaster, near the Pecos River. Two tests have previously been abandoned in this area, one in Section 33 which went to 1,407 feet, and one in Section 1, D. Dickerson Survey, which struck sulphur water at 2,008 feet.

Tom Green County

The California Co. has also taken leases in Block 5, H.&T.C. Survey, Tom Green County. Total number of acres taken in Sterling and Tom Green by this company runs around 2,068 acres.

Hobbs Operators Meet

At a meeting of operators at Dallas, April 27, it was decided that another test should be made of all wells in the Hobbs Field, New Mexico, to obtain a closer check on the potentials of the wells. Umpire C. G. Staley will gauge the wells, gauges to be taken with wells flowing open through 3-inch tubing for a short period, and the tubing-casing ratio curve plan applied to arrive at the estimated daily open flow rate.

There are 153 wells in the field, which have had an estimated potential of 1,158,934 bbls. daily. There has been no late gauge taken to check this potential, and it has fallen considerably due to some of the wells recently showing bottom hole water. Natural gas and oil decreases also affect the potential. The west flank of the field has felt the encroachment of sulphur water, and there are 16 wells in this area which are making water, with new ones showing up from time to time.

Total daily average distribution in West Texas and Lea County, New Mexico, for the week ending April 21 was 221,536 bbls.; production 213,667 bbls. Daily average from storage 7,869 bbls. Total oil to local refineries 23,101 bbls. No tank car shipments; oil moved by rail lines 198,435 bbls.

Ranger and Wichita Falls Districts

There were 11 locations staked in the Ranger district this week and over 40 in the Wichita Falls district, both districts showing an increase in activities, Archer and Young Counties being the most active areas in the latter district, while Brown and Shackelford remain the most active in the former.

An interesting test is to be drilled in the southwest corner of the C. K. Hamm Survey, abstract 322, due north of Ringgold in the northwest corner of Montague County, the test to go to 1,800 feet and be drilled with cable tools.

O. T. Anderson and others' No. 1 Abercrombie, a due south offset to Perkins and Cullum's No. 1-A Abercrombie, discovery well in semiwildcat area, Archer County, logged hard saturated lime at 1,184-94 feet, soft saturated lime at 1,194-1,206 feet, or at the same level at which the discovery well was completed. It was estimated for only a small well at that depth. It was deepened to 1,210 feet and 150 feet of oil rose in the hole in one hour through mud, the oil coming from a solid oil sand struck at 1,207-10 feet. It is now showing for a better well than the discovery, and is estimated for a 150-bbl. pumper. Elevation is 1,003 feet. Top of the Gunsight lime and top of the first pay were the same, 1,184 feet. A considerable amount of trading has taken place in the area, The Texas Company being the only major company to take part in the activity.

Fain & McGaha's No. 1 fee in North Archer County, which opens a small new pool in the Holliday district, was completed for an initial production of 124 bbls. of oil with no water, pumping. The present gauge is 100 bbls. oil with no water. One offset test is drilling, and another location has been staked near the discovery.

Panhandle District

Magnolia Petroleum Co.'s No. 1 Neild in Moore County, 1 mile northwest of a big well completed last spring by the Shamrock Oil & Gas Co. on the Brumley ranch, and due north offset to the same company's No. 1-C Coffee, completed some time ago for a 100-bbl. well at 3,500 feet, is now shut down at 3,646 feet with 1,200 feet of water in the hole from 3,641-46 feet. It will be plugged back to try to complete for a gas well. Gas showings were encountered from 2,875-2,900, 2,930-3,000, 3,005-50 and 3,416 feet. The only oil show encountered in the test was at 3,421 feet. Sun Oil Co.'s No. 1 Brumley, a diagonal southeast offset to the Neild test, has 1,800 feet of oil in the hole from 3,468-75 feet. Total depth is 3,598 feet. Elevation is 3,579 feet. These three tests and producers show the erratic nature in the formations in this area, in which mostly large gas producers are completed.

COMPLETIONS IN WEST TEXAS

Fisher County

Southern Oil Co.'s No. 1 Flanigan, top pay 3,087 feet; initial production 384 bbls., total depth 3,111 feet.

COMPLETIONS IN PANHANDLE DISTRICT

Gray County

Skelly Oil Co.'s No. 6 Schaffer, top pay 3,200 feet, shot 60 quarts 3,195-3,255 feet, initial production 130 bbls., total depth 3,270 feet.

WILDCAT OPERATIONS IN WEST TEXAS

Week Ending May 2

ANDREWS COUNTY

Company, well, farm name, section and block—	Remarks—
Fuhrman Pet. Co.'s No. 1 Boner, 1,320 ft. from N and 440 ft. from W, Sec. 24, Blk. A-43, P.S.L.	Fishing 4,165 ft.

BREWSTER COUNTY

Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur.	S.D. 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	S.D. 1,302 ft.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur.	S.D. 2,900 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles south Alpine	S.D. 1,750 ft.

CONCHO COUNTY

Beesley et al's No. 1 Waring Estate, 400 ft. from N and E, Sec. 163, T.&N.O. Sur.	S.D. 1,700 ft.

CRANE COUNTY

Continental Oil Co.'s No. 1-D Camden, 200 ft. from S and 2,492 ft. from E Sec. 18, Blk. X	Location.

CROCKETT COUNTY

Doleman & Moore's No. 1 Ferner, 2,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur.	Spudded and S.D.
The Texas Company's No. 1 B. B. Ingham, 330 ft. from S and 2,330 ft. from E line, Sec. 36½, I.&G.N. Sur.	Location.

COKE COUNTY

Mid-Kansas Oil & Gas Co.'s No. 1 Hearn, 980 ft. from S and W, Sec. 271, Blk. 1-A, H.&T.C. Sur.	Drlg. 925 ft.

DAWSON COUNTY

Albaugh et al's No. 1 Robinson, C NW Sec. 46, Blk. M, E.L.&R.R. Sur.	To resume drilling.

ECTOR COUNTY

Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft. from E, Sec. 38, Blk. 43, Twp. 3s, T.&P. Sur.	Drlg. 760 ft.
H. F. Wurtz' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 3s, G. M. M.Br.&A. Sur.	T.D. 3,275 ft.

EL PASO COUNTY

Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, S.F. No. 7,247	S.D. 2,257 ft.

FISHER COUNTY

Condor Petroleum Co.'s No. 1 Steele, 660 ft. from S and 330 ft. from W of W half of SE Sec. 210, B.B.B.&C. Ry. Sur.	Drlg. 1,615 ft.
Cranfill & Reynolds' No. 1 George, 400 ft. from N and 380 ft. from E, Sec. 200, Blk. 1, B.B.B.&C. Sur.	T.D. 5,255 ft.; underreaming 5 3/16-in. csg.
Sinclair-Prairie's No. 2 Steele, 250 ft. from N and W of NE Sec. 72, H.T.&B. Sur.	Drlg. 1,155 ft.
Southern Oil Corp. of America's No. 1 Wm. Flannigan, 240 ft. from E and 165 ft. from W line of S 20 acres of SW, Sec. 20, B.B.B.&C.R.R. Sur.	Swabbed 384 bbls. 24 hrs.; T.D. 3,111 ft.

GAINES COUNTY

McElreath et al's No. 1 Sparks, 330 ft. from N and E Sec. 397, Blk. G	Location.

GLASSCOCK COUNTY

Mann et al's No. 1 fee, 330 ft. from N and 1,980 ft. from E, Sec. 27, Blk. 34, Twp. 3s, T.&P. Sur.	T.D. 2,070 ft.
Humble Oil & Ref. Co.'s No. 2 Arrington, 1,300 ft. from W, Sec. 22, Blk. 33, Twp. 2s, T.&P. Sur.	Drlg. 500 ft.

(Continued on Page 48)

FATIGUE

You know the type of man who works under nervous tension. By 3 o'clock he is all in. Burned out. Fidgety and cranky. It is not natural for the human machine to work under internal stress.

So It Is With Wire Rope That Is Not Preformed

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Due to internal inherent torsional strain, non-preformed wire rope wears out prematurely. Its life is cut short because the wires fatigue earlier and the rope loses its elasticity and strength.

TRU-LAY Preformed Wire Rope Resists Fatigue Resulting in Increased Service Which Averages Between 30% and 300% Over Non-Preformed Rope

The statement "30% to 300% increased service with TRU-LAY" is not merely an advertising claim. Hundreds of bona-fide service reports in our files prove that under the same operating conditions—and on the same equipment—TRU-LAY thus outwears and outlasts non-preformed wire rope.

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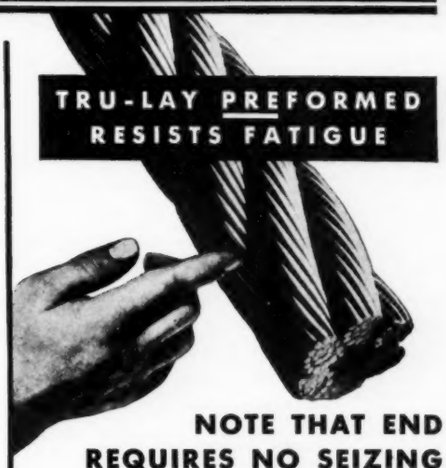


NOTE THAT END REQUIRES NO SEIZING

This illustration is made from an honest, unretouched photograph of Tru-Lay Preformed Wire Rope. Only in Preformed Wire Rope will the strands and wires stay in position without seizing or tying the end as this photograph reveals.

In Tru-Lay, wires and strands are helically shaped so they lie in position, *relaxed*. There is no straightening-out tendency—no internal stress. The result is less fatiguing action, longer life, easier handling, greater flexibility, just to mention a few of the advantages of TRU-LAY.

Tru-lay is furnished in every grade, type and construction developed over a long period of years . . . and every TRU-LAY PREFORMED ROPE gives 30% to 300% longer service over non-preformed wire rope of similar grade, type and construction.

TRU-LAY *Preformed* WIRE ROPE

30% to 300% *Increased Service* *Depending upon the character of the service and type of equipment*

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 46)

Peck & Service's No. 1 Gillean, 2,310 ft. from S, 1,650 ft. from E, Sec. 21, Blk. 33, Twp. 2s, T.&P. Sur. ..... S.D. 2,345 ft.
Penn Oil Co. et al's No. 1 F. A. Hobenstreit, 2,310 ft. from N and E lines of Sec. 47, Blk. 36, Twp. 3s, T.&P. Sur. ..... Drlg. 2,163 ft.

GARZA COUNTY

Penny & Posey's No. 1 Justice, 1,980 ft. from S and 1,680 ft. from E of Sec. 25, Blk. 6, H.&G.N. Sur. (3,500-ft. cable tool test) ..... S.D. 3,390 ft.

HOWARD COUNTY

American-Maracaibo's No. 5-A Settles, 1,896 ft. from N, 1,884 ft. from W, Sec. 6, Blk. 32, T.&P. Sur. ..... Rig.
F. H. E. Oil Co.'s No. 1 Denman, 330 ft. from N, 2,310 ft. from E of Sec. 14, Blk. 30, T.&P. Sur. ..... Drlg. 2,444 ft.
Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. Spudded and S.D.
Harrison's No. 2 Denman, 1,650 ft. from S and 355 ft. from E Sec. 10, Blk. 30, Twp. 1s, T.&P. Sur. ..... Drlg. 1,002 ft.
Myers et al's No. 1 Denman, 2,305 ft. from S and 2,320 ft. from E Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. ..... S.D. 730 ft.
Sinclair-Prairie Oil Co.'s No. 2 Dodge, 2,313 ft. from S and 300 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P. Sur. ..... Spudding.
Wallace et al's No. 1 Belt, 1,960 ft. from N, 2,640 ft. from W, Sec. 12, Blk. 30-1s, T.&P. Sur. ..... Drlg. 2,305 ft.

IRION COUNTY

Apollo Oil Co.'s No. 4 Nutt, 504 ft. from N and 1,562 ft. from W of Subd. No. 6, Gonzales County School Land ..... Cellar.
Davis et al's No. 1 Suggs, 1,560 ft. from S and 925 ft. from W, Sec. 3,081, Blk. 28, H.&T.C. Sur. ..... Fishing 7,535 ft.
Stanolind Oil & Gas Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. ..... S.D. 7,420 ft.

JONES COUNTY

Johnson's No. 1 Huddleston, 165 ft. from S and W of N half of N half of Sec. 39, Blk. 18, T.&P. Sur. ..... Spudded and S.D.
J. M. Johnson's No. 1 Swann, 6,150 ft. from S and 1,550 ft. from E, I. Miley Sur. ..... Rigged up and S.D.
C. S. Spelling et al's No. 1 Lillie, 200 ft. from N and W Sec. 4, E. Miller Sur. No. 2 ..... Set 10-in. csg. 1,240 ft.
Young et al's No. 1 Harrell, 150 ft. from S and E of N half of Sec. 8, O.A.L. Sur. ..... Location.
Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 43.4-acre tract in G. Martinez Sur. ..... S.D. 1,005 ft.; **temp. abnd.**
Transcontinental Prod. Co.'s No. 1 Rust, 5,300 ft. N and 995 ft. W of SE cor. J. J. Hughes Sur. 556 ..... Spudded.

LOVING COUNTY

Eppenauer's No. 1 Freels, 1,263 ft. from NE, 410 ft. from NW, Sec. 92, Blk. 1, W.&N.W. Sur. ..... S.D.
Wm. Little's No. 1 Hugo Freels, 1,923 ft. from NE lines and 410 ft. from NW line of Sec. 92, W.&N.W. Sur., Blk. 1 ..... S.D. 4,030 ft.
Martin's No. 1 Freels, 3,514 ft. from NE and 412 ft. from NW of Sec. 92, Blk. 1, W.&N.W. Sur. ..... Drlg. 2,003 ft.
Covey et al's No. 1 Wheat, 2,310 ft. from SW, 330 ft. from SE, Sec. 3, Blk. 2, W.&N.W. Sur. ..... S.D. 720 ft.
Eppenauer Drlg. Co.'s No. 1 Allen, 465 ft. from NE and SE, Sec. 4, Blk. 2, W.&N.W. Sur. ..... S.D. 200 ft.
Ervin & Mahres' No. 1 Thrope, 2,310 ft. from E and 330 ft. from S, Sec. 46, Blk. 53, T.&P. Sur. ..... S.D. 810 ft.
Falbre & Evans' No. 1 Dean, 330 ft. from NE and 990 ft. from NW, Sec. 79, Blk. 33, H.&T.C. Sur. ..... T.D. 4,275 ft.; cleaning out.
Lewis & Slagel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W, Sec. 6, Blk. 56, Twp. 1, T.&P. Sur. Drlg. 1,845 ft.
Reagan & McElvain's No. 2 Bowen & Wells, 330 ft. from NE and SE of Sec. 92, Blk. 1, W.&N.W. Sur. ..... S.D. 4,318 ft.; to shoot; T.P. 4,307 ft.
Miller et al's No. 1 Ferguson, 990 ft. from N and E of Sec. 44, Blk. 29 ..... S.D.
Tennant et al's No. 1 Martin, 990 ft. from NW and SW, Sec. 66, Blk. 1, W.&N.W. Sur. ..... S.D. 4,380 ft.
Thomas' No. 1 Wheat, 2,310 ft. from NW, 990 ft. from NE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... Drlg. 1,840 ft.

MEARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor., Sec. 132, E.L.R.R. Sur. ..... S.D. 2,860 ft.

PECOS COUNTY

Anderson's No. 1 Lee Fever, 330 ft. from N and W of Sec. 75, Blk. 8, H.&G.N. Sur. ..... S.D. 2,037 ft.
Black et al's No. 1 Pecos Valley, 1,037 ft. from SE, 433 ft. from SW, Sec. 36, Blk. 3, H.&T.C. Sur. ..... Drlg. 1,578 ft.
Cardinal Oil Co.'s No. 1 J. H. Tippett ("J"), 1,980 ft. from the S line and 990 ft. from the W line of Sec. 2, D. F. Robertson Sur. ..... S.D. 675 ft.
Corvette Oil Corp.'s No. 8 H. Monroe, 1,040 ft. from E line and 150 ft. from N line of Sec. 39, G.C.&S.F. Sur., Blk. 194 ..... Location.
Dan Easter's No. 4 Tippett, 150 ft. from N and 1,335 ft. from W of SE, Sec. 40, Blk. 194, G.C.&S.F. Sur... T.P. 1,290-95 ft.; T.D. 1,330 ft.
Gulf Prod. Co.'s No. 34 Yates, 13,415 ft. from W and 330 ft. from S of Runnells County School Land ..... Location.
Hampton et al's No. 1 Byrne, 1,980 ft. from NW and 1,500 ft. from NE, Sec. 54, Blk. 10, H.&G.N. Sur. ... T.D. 1,395 ft.; T.P. 1,356 ft.; S.D. for tubing.
Dittman's No. 1 Sanford, 330 ft. from NW and 1,650 ft. from NE of Sec. 55, Blk. 10, H.&G.N. Sur. ..... S.D. 1,454 ft.

PRESIDIO COUNTY

Sadler et al's No. 1 Bledsoe, 2,640 ft. from N and W Sec. 15, Blk. 354, G.C.&S.F. Sur. ..... Rigging up.

REAGAN COUNTY

Big Lake Oil Co.'s No. 6-C University, 1,370 ft. fro mS and 1,000 ft. from E, Sec. 12, Blk. 2 ..... Drlg. 8,346 ft.
Big Lake Oil Co.'s No. 7-C University, 1,570 ft. from W and 725 ft. from S, Sec. 25, Blk. 9 ..... Drlg. 415 ft.
Group Oil Corp.'s No. 5-B University, 2,700 ft. from S and 1,775 ft. from W, Sec. 36, Blk. 9 ..... Bldg. foundation.

REEVES COUNTY

Continental Oil Co.'s No. 5-B University, 2,700 ft. from S and 1,775 ft. from W Sec. 36, Blk. 9 ..... Location.
F. McDorman et al's No. 1 Ray Roberts et al, 2,310 ft. from S and E lines of Sec. 22, Blk. 59, P.S.L. Sur. ... S.D. 140 ft.
Southern Star Oil Co.'s No. 1 Wright, 1,330 ft. from S and W, Sec. 58, Cassel's Sur. ..... S.D. 75 ft.; bldg. derrick.
Lee O. White et al's No. 1 Hershorser, 330 ft. from N and W lines of Sec. 5, Blk. 51, Twp. 10, T.&P. Sur... S.D. 5,044 ft.

RUNNELS COUNTY

Blue Bonnett Oil Co.'s No. 1 McMillan, 1,368 ft. from N and 660 ft. from W, Sec. 22, N. Travis Sur. ..... Drlg. 1,175 ft.
Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 519 ..... S.O. 3,417-20 ft.; S.D. 3,600 ft.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... Fishing 5,410 ft.
Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,302 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... S.D. 5,580 ft.; **fishing.**
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,570 ft. from W, G.H.&S.A. Sur. ..... S.D. 5,053 ft.

SCURRY COUNTY

G. E. Dickman et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sub. ..... S.D. 5,050 ft.
W. S. Guthrie's No. 1 Snyder National Bank, 330 ft. from N and 2,310 ft. from E of Sec. 115, Blk. 97, H.&T.C. Sur. ..... Location.
Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 68, Blk. 3, H.&G.N. Sur. ..... Spudded and S.D.
Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... T.D. 4,565 ft.

TAYLOR COUNTY

Eastland Oil Co.'s No. 1 King, 150 ft. from S and E, Lot 27, Willis Sur. ..... Drlg. 1,340 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M.-K.-T. Sur. ..... S.D. 2,269 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... S.D. 3,150 ft.; **moved off tools.**
Miller Bros.' No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, T.&P. Sur. ..... S.D. 120 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 26, Blk. 161, G.C.&S.F. Sur. S.D. 6,120 ft.
Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... S.D. 2,545 ft.
Sides et al's No. 1 Phelps, 2,157 ft. from N and 2,482 ft. from W, Sec. 5, G. W. Hurley Sur. ..... S.D. 1,000 ft.

TOM GREEN COUNTY

Andrews' No. 1 Pugh, 250 ft. from N and 5,184 ft. from E, James Eldridge Sur. No. 73 ..... S.D. 453 ft.
Belding & Dutton's No. 1 Norsworthy, 1,640 ft. from S and 587 ft. from E of John McNeese Sur. ..... **S.D. 760 ft.; S.O. and gas 725 ft.**
Mintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur.... S.D. 1,994 ft.
Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... S.D. 200 ft.

UPTON COUNTY

Farley et al's No. 1-B Lone, 2,310 ft. from N and E, Sec. 36, Blk. 1, M.-K.-T. Sur. ..... S.D. 2,261 ft.; T.P. 2,183 ft.; to deepen.

VAL VERDE COUNTY

Couch et al's No. 1 J. P. Yoas, 1,300 ft. from the N line and E line of Sec. 31, Blk. 1 ,I.&G.N. Sur. .... S. D. 220 ft.
Independent Operators' No. 1 Whitehead, SE SE Sec. 10, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... S.D. 5,360 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev 2,130 ft. ..... S.D. 6,780 ft.

WARD COUNTY

Abell Bros. et al's No. 1 Smith, 330 ft. from NE and NW, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 500 ft.
Bradford & Bentley's No. 1 B. Carson, 1,650 ft. from the NE line and 990 ft. from the SE line of Sec. 26, H.&T.C. Sur., Blk. " ..... T.D. 860 ft.
Buck Sturm et al's No. 2 R. H. Gill, 2,310 ft. from SW line and 330 ft. from SE line, Sec. 25, Blk. B-29, P.S.L. Sur. ..... S.D. 2,497 ft.
Eastland Oil Co.'s No. 1 Weiss, 2,365 ft. from SE and SW, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 1,120 ft.
Eppenauer's No. 1 Purcell, 365 ft. from SW and 1,650 ft. from SE of Sec. 17, Blk. 14, H.&T.C. Sur. ..... T.D. 2,740 ft.
Eppenauer Drlg. Co.'s No. 1 Townsend-Moore, 990 ft. from SE and 330 ft. from SW, Sec. 17, Blk. 34, H.&T.C. Sur. ..... Spudded and S.D.
H. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW, Sec. 12, Blk. 5, H.&T.C. Sur. ..... S.D. 2,145 ft.
Gulf Prod. Co.'s No. 11 Hutchings, 330 ft. from N and 990 ft. from W of 370 acres in S half Sec. 5, Blk. F ... Bldg. rig.
Massie et al's No. 1 Stewart, 330 ft. from SW and SE, Sec. 12, Blk. 14, H.&T.C. Cur. ..... Drlg. 1,205 ft.
Moran & Burkhart's No. 2 J. T. Sweatt et al, 3,810 ft. from SW, Sec. 1, J. Howe Sur. ..... Drlg. 1,205 ft.
Moran & Miles' No. 1 Boogher, 3,603 ft. from NE and 1,303 ft. from SE, Sec. 11, Blk. 5, H.&T.C. Sur. ..... S.D. 2,040 ft.
R. F. Owen's No. 1 Lee, 1,344 ft. from NW and 4,532 ft. from SW, Sec. 1, J. Howe Sur. ..... Drlg. 1,272 ft.
Plains Prod. Co.' and Simms Oil Co.'s No. 1 Benton Land Co., 440 ft. from the SE and 440 ft. from SW lines of Sec. 26, W.&N.W.R.R. Sur., Blk. 1 ..... S.D. 845 ft.
Rector Oil Co.'s No. 1 Smith, 1,320 ft. from N and E, Sec. 23, Blk. A, G.M.M.B.&A. Sur. ..... S.D. 3,602 ft.
Renaud-Prettyman's No. 1 University, 330 ft. from N and E Sec. 4, Blk. 16 ..... Derrick.
Richardson et al's No. 8 O'Brien, 1,372 ft. from N, 330 ft. from W, Sec. 5, Blk. F ..... Drlg. 1,440 ft.
Richardson et al's No. 7 O'Brien, 1,900 ft. from N and 330 ft. from W Sec. 5, Blk. F ..... Drlg. 2,635 ft.
Richardson et al's No. 9 O'Brien, 1,112 ft. from N and 990 ft. from W Sec. 5, Blk. F ..... Rig up.
Rixford et al's No. 1 Green, 330 ft. from NW and SW Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 1,205 ft.
Sturm-Simms Oil & Gas Co.'s No. 2 Jones, 1,650 ft. from NE and 330 ft. from SE, Sec. 25, Blk. B-29, P.S.L.... Location.
T. P. Coal & Oil Co.'s No. 2 James, 330 ft. from NW and NE Sec. 5, Blk. 34 ..... Drlg. 2,375 ft.
White et al's No. 1 Burtner, 150 ft. from NE and 515 ft. from SE of Sec. 8, Blk. 32, H.&T.C. Sur. ..... S.D. 755 ft.

WINKLER COUNTY

Adams et al's No. 1 Scarborough, 660 ft. from N and E Sec. 1, Blk. 77, P.S.L. ..... Drlg. 800 ft.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week Ending May 2

BRISCOE COUNTY

Company, well, farm name, section and block— Remarks:
Humble O. & R. Co.'s No. 1 C. Adair est., 2,500 ft. from N line, 2,100 ft. from E line, Sec. 7, Blk. G-6..... Drlg. 3,490 ft.

CARSON COUNTY

Danciger's No. 4 Byrum, 330 ft. from N and E, Sec. 188, Blk. 3, I.&G.N. Sur. ..... Cellar.
H. A. M. Oil Co.'s No. 2 Cooper, 330 ft. from S and E, Sec. 5, Blk. 9, I.&G.N. Sur. ..... Location.
Pulse-Shell Pet. Corp.'s No. 1 Byrum, 330 ft. from N and W, W½ NE, Sec. 188, Blk. 3, I.&G.N. Sur. ....T.D. 1,130 ft.; standardizing.
Skelly Oil Co.'s No. 16 West Schaffer, 1,265 ft. from S, 440 ft. from W, Sec. 88, Blk. 4, I.&G.N. Sur. ..... T.P. 3,026 ft.; drlg. 3,180 ft.; swabbed 161 bbls. in 22 hrs.
Skelly Oil Co.'s No. 17 West Schaffer, 1,320 ft. from S, 440 ft. from E, Sec. 87, Blk. 4, I.&G.N. Sur. ..... Drlg. 1,750 ft.
Texoma Nat. Gas Co.'s No. 1-E Dauer, 1,335 ft. from S, 1,327 ft. from E, Sec. 73, Blk. 4, I.&G.N. Sur. ..... Drlg. 1,270 ft.
Texoma Nat. Gas Co.'s No. 1-G Haiduk, 2,589 ft. from N, 1,531 ft. from W, Sec. 21, Blk. 4, I.&G.N. Sur. ... Drlg. 1,975 ft.

CHILDRESS COUNTY

C. L. Sloan et al's No. 1 B. P. Smith, Sec. 49, F. P. Knott lands ..... T.D. 5,000 ft.

COLLINGSWORTH COUNTY

Dixon et al's No. 1 Bell, 330 ft. N, 1,320 ft. W, Sec. 102, Blk. 21, H.&G.N. Sur. ..... S.D. 2,508 ft.
Downey et al's No. 1 Beasley, SE cor. SW SE, Sec. 95, Blk. 15, H.&G.N. Sur. ..... Rigging up.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, C NW, Sec. 18-3n-2e ..... S.D. 275 ft.

GRAY COUNTY

Back & Barber's No. 1 Back, 660 ft. from S, 330 ft. from W, Sec. 140, Blk. 25, H.&G.N. Sur. ..... S.D. 2,428 ft.
Boyes et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur. ..... Rigging up cable tools.

Brown et al's No. 1 Duncan, 330 ft. S and E, NW, Sec. 93, Blk. 3, I.&G.N. Sur. ....Drlg. 3,775 ft.
Continental Oil Co.'s No. 1-A Wright, 330 ft. from S and E of E½ NW, Sec. 13, Blk. 3, I.&G.N. Sur. ....Drlg. 940 ft.
Danciger O. & R. Co.'s No. 2 William, 150 ft. N, 990 ft. from W S half NW, Sec. 7, Blk. 1, A.C.H.&R. Sur....Rig on ground.
Elbar Corp.'s No. 1 Sethings, 330 ft. from S and E, Sec. 13, Blk. A-9, H.&G.N. Sur. ....Location.
Foster's No. 1 Webb, 330 ft. from S and W, Sec. 43, Blk. 25, H.&G.N. Sur. ....Drlg. 2,175 ft.
Graham et al's No. 1 Barrett, 990 ft. from N, 330 ft. from E, Sec. 112, Blk. 3, I.&G.N. Sur. ....Rigging up rotary.
Granite Prod. Co.'s No. 1 Chapman, 275 ft. from N line, 110 ft. from W line, S½ SW, Sec. of Blk. 26, H. &G.N. Sur. ....Drlg. 2,325 ft.; 7,000,000 ft. gas.
Jean Pet. Co.'s No. 1 Furneaux Bros., 330 ft. N and W, cor. SE, Sec. 200, Blk. 2-B, H.&G.N. Sur. ....Drlg. 3,030 ft.
Jewel Oil Co.'s No. 1 Meers, 330 ft. from S and W, NW SW, Sec. 106, Blk. 3, I.&G.N. Sur. ....Fishing 3,325 ft.
Mid-Kansas O. & G. Co.'s No. 1 Webb, 990 ft. from N, 330 ft. from W, NE Sec. 61, Blk. 25, H.&G.N. Sur. ..Drlg. 150 ft.
Nelson et al's No. 1 Crews, 330 ft. S and E, NW, Sec. 12, Blk. 25, H.&G.N. Sur. ....S.D. 2,620 ft; estimated 4,000,000 ft. gas.

Nipper et al's No. 1 Morse, 330 ft. from N and E, Sec. 1, Blk. 26, I.&G.N. Sur. ....Fishing 2,635 ft.
Nabob Oil Co.'s No. 1-E Morse, 330 ft. from S and W, W½ SE, Sec. 67, Blk. 25, H.&G.N. Sur. ....Rig on ground.
Operators Royalty & Prod. Co.'s No. 2 Arnold, 330 ft. from S and W, Sec. 149, Blk. 3, I.&G.N. Sur. ....Rig.
Operator's No. 1 Ferguson, 330 ft. from N and E of NW, Sec. 34, Blk. B-2, H.&G.N. Sur. ....To deepen; T.D. 3,025 ft.; move in tools.

Parton & Holt's No. 2 Morse, 330 ft. from W, 250 ft. from N, W½ SW, Sec. 5, Blk. 26, H.&G.N. Sur. ....T.D. 90 ft.; running 12-in. csg.
Phillips Pet. Co.'s No. 6 Wood-Wright, 330 ft. from N and E, Sec. 13, Blk. 3, I.&G.N. Sur. ....Drlg. 2,550 ft.
Pulse-Shell Pet. Corp.'s No. 1 Culler, 330 ft. from S and E, Sec. 173, Blk. 3, I.&G.N. Sur. ....Rigging up cable tools.
Saulsbury et al's No. 1 Davidson, 330 ft. from S and W, Sec. 87, Blk. B-2, H.&G.N. Sur. ....Drlg. 375 ft.
Saunders et al's No. 2 Sullivan, 822 ft. from W, 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, I.&G.N. Sur. ....Will plug back to 3,275 ft. and shoot.

Shamrock O. & G. Co.'s No. 3 Saunders, 330 ft. from S and W, Sec. 40, Blk. 3 ....Drlg. 2,565 ft.
Skelly Oil Co.'s No. 1 Saunders, 990 ft. from S and E of SW, Sec. 4, Blk. 1, A.C.H.&B. Sur. ....T.D. 2,812 ft.; to plug back for gasser.

Skelly Oil Co.'s No. 7 East Schaffer, 440 ft. from S and W, Sec. 171, Blk. 3, I.&G.N. Sur. ....T.D. 3,271 ft.; T.P. 3,245 ft.; cleaning out.

Skelly Oil Co.'s No. 8 East Schaffer, 220 ft. from N, 440 ft. from W, Sec. 172, Blk. 3, I.&G.N. Sur. ....S.D. 2,567 ft.
Skelly Oil Co.'s No. 9 East Schaffer, 1,320 ft. from S, 440 ft. of N½, Sec. 189, Blk. 3, I.&G.N. Sur. ....T.D. 1,144 ft; standardizing.
Tarber's No. 1 Saunders, 330 ft. N and W, Sec. 3, Blk. 1, B.B.&S.F. Sur. ....Location.
The Texas Co.'s No. 7 Wright, 330 ft. from N and W, Sec. 13, Blk. 3, I.&G.N. Sur. ....T.D. 2,150 ft.; reaming 8-in. csg. 1,813 ft.

The Texas Co.'s No. 9 Williams, 150 ft. from S, 990 ft. from N half NW, Sec. 7, Blk. 1, A.C.H.&B. ....Rig.
Travis' No. 3 Back, 330 ft. from S, 2,300 ft. from E. Sec. 44, Blk. 25, H.&G.N. Sur. ....Drlg. 1,825 ft.
Warner Oil Co.'s No. 2 Chapman, 382 ft. N, 220 ft. W of E 20 ac. of N½ NW, Sec. 69, Blk. 25, H.&G.N....Rigging up cable tools.
Weltzel Oil Co.'s No. 2 Morse, 330 ft. from S and E of N half NW, Sec. 67, Blk. 25, A.&G.N. Sur. ....Rig.

HEMPHILL COUNTY

Hoover's No. 1 Hoover, 350 ft. from N, 1,200 ft. from E, G. S. Hood Sur. ....To deepen old well; T.D. 5,055 ft.; moving in tools.

HUTCHINSON COUNTY

Baso's No. 1 Moore, 330 ft. from S, 330 ft. from E, in 80 ac. in NW, Sec. 21, Blk. M-21, T.C.R.R. Sur. ....T.D. 3,080 ft.; shot 100 qts. 3,028-64 ft.; hole bridged.

Combination O. & G. Co. and Alspaugh's No. 1 Johnson, 330 ft. from S line, 330 ft. from E line, NW SW, Sec. 4, Blk. Y, A.&B. Sur. ....Tools stuck 2,295 ft.
Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur. ....Spudded and S.D.
Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 81, Blk. 46, H.&T.C. Sur. ....S.D. 450 ft.
Huber Pet. Co.'s No. 1-A Weatherly, 330 ft. from N and W, Sec. 26, Blk. Y, A.&B. Sur. ....Drlg. 660 ft.
Liner Drlg. Co.'s No. 1-D Johnson, 330 ft. from N and E, Sec. 6, Blk. 1, B.&B. Sur. ....S.D. 3,152 ft.
Oates and Marrow's No. 1 W. A. Starnes, C SE SW SE, Sec. 24, Blk. M-23, T.C.R.R. Sur. ....T.P. 3,122 ft.; T.D. 3,177 ft.; shot; swabbing.

Pharis Oil Co.'s No. 5 Smith, 660 ft. from N and W, SW, Sec. 14, Blk. Y, M.&C. Sur. ....Spudded.
Stekoll's No. 1-D Whittenburg, 330 ft. from S, 450 ft. from E, Sec. 38, Blk. M-23, H.&T.C. Sur. ....Drlg. 2,775 ft.
Timms-Deatch's No. 4 Moore, 330 ft. N and W, Sec. 124, Blk. 4, I.&G.N. Sur. ....Rig.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ....T.D. 5,003 ft.

MOORE COUNTY

Dogie Oil Co.'s No. 1 Greenwald, 330 ft. from N and W, Sec. 277, Blk. 44, H.&T.C. Sur. ....S.D. 205 ft.
Dana O. & G. Co.'s No. 1 Robertson et al, 330 ft. from S and E, Sec. 165, Blk. 3-T, T.&N.O. Sur. ....Cellar.
Interstate's No. 1 Nield, C NE, Sec. 18, Blk. 44, H.&T. C. Sur. ....Rig up.
Magnolia Pet. Co.'s No. 1 Nield, 330 ft. from S and E, N½, Sec. 361, Blk. 44, H.&T.C. Sur. ....Show oil 3,421 ft.; T.D. 3,646 ft.; plugging back.

Pollard et al's No. 1 Hall, 330 ft. S and E, NE, Sec. 121, Blk. 3-T, T.&N.O. Sur. ....Rig on ground.
Sunray Oil Co.'s No. 2 Jones, 330 ft. N and W, W½ SW, Sec. 164, Blk. 3-T, T.&N.O. Sur. ....Rig on ground.
Sunset Oil Co.'s No. 1 R. O. Brumley, 330 ft. from N line, 330 ft. from W line, SW, Sec. 360, H.&T.C. Sur...T.D. 3,598 ft.; plugging back.
Sunset Oil Co.'s No. 1 Dore, 330 ft. from N and W, W½, Sec. 318, Blk. 44, H.&T.C. Sur. ....Drlg. 3,010 ft.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ....S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur. ....S.D. 400 ft.
Chambers et al's No. 1 Herring, CNL, Sec. 20, Blk. S, G.C.&S.F. Sur. ....Drlg. 3,600 ft.

PARMER COUNTY

Magnolia Pet. Co.'s No. 1 Wilson, 330 ft. from N and W, SE, Sec. 73, H. Kelly Sur. ....S.D. 4,415 ft.; tools stuck.

POTTER COUNTY

Red River Gas Co.'s No. 7-A Bivins, center SW, Sec. 38, Blk. M-20, G.&M. Sur. ....Cmtd. 12-in. csg. 377 ft.

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur. ....T.D. 3,990 ft; to set 8-in. csg.

Travis et al's No. 1 Cunningham, 330 ft. S and W, Sec. 74, Blk. M-2, H.&G.N. Sur. ....S.D. 2,690 ft.

WHEELER COUNTY

Devore & Robinson's No. 1 Sitter, 2,310 ft. from S and E, E½, Sec. 33, Blk. 24, H.&G.N. Sur. ....S.D. 2,559 ft.; 15,000,000 ft. gas.

EAST AND EAST CENTRAL TEXAS WILDCATS

(Continued from Page 42)

DELTA COUNTY

Commerce Oil Co.'s No. 1 Ablowich, 150 ft. from S line and 776 ft. from W line of H. D. Jewett 62-ac. tract, E. Chick Sur. ....Drlg. 3,315 ft.
Joiner et al's No. 1 Blackwell, 800 ft. S and 150 ft. from E lines of 275-ac. tract, Dunnetelle Sur. ....Drlg. 1,433 ft.

ELLIS COUNTY

Community's No. 1 Reeves ....Waiting on cmt. to set 100 ft.
E. M. Rogers' No. 1 John Lee Winn, 1,650 ft. from E and 150 ft. from S of Orland, Orlo Wheeler Sur. ....S.D. 1,435 ft.
Wortham Petroleum Co.'s No. 2 Cerf, John Harris Sur., 50 ft. W of No. 1 ....Location.

FRANKLIN COUNTY

Tom Harper's No. 1 fee, 150 ft. from N line and 200 ft. from E line of 116-ac. tr., W. M. Dawson Sur. ....Drlg. 3,100 ft.
T. E. Mayberry's No. 1 M. L. Edwards, 345 ft. from E line of lease and 6½ miles NW of Mount Vernon, C. R. Miller Sur. ....Bldg. derrick.

GREGG COUNTY

Adams and Lyles' No. 1 L. Howard, E offset to Sun Oil Co.'s No. 2 Smith, M. Scott Sur. ....Drlg. 1,600 ft.
Alexander and Rassmussen's No. 1 Dixon, 335 ft. N and 169 ft. W of SE cor. of J. M. Dixon 106.5-ac. tract, I. Beaty Sur. ....Derrick.
Arkansas Drilling Co.'s No. 1 Adkins heirs, 500 ft. from S line and center of E and W lines of Lot 1, D. Dainwood Sur. ....Drlg. 3,580 ft.
Arkansas Fuel Oil Co.'s No. 1 Taylor Lee, 330 ft. out of NW cor. of 52.1-ac. lease, William Robinson Sur. ....Rig up.
Arkansas Fuel Oil Co.'s No. 1 E. M. Watley, 415 ft. E and 330 ft. N of SW cor. of 43.91-ac. lease, Wm. Robinson Sur. ....Derrick.
Atlantic Oil Producing Co.'s No. 1 T. B. Harris, 330 ft. from most easterly E line and center of N and S lines of lease, W. H. Castleberry Sur. ....Testing 3,583 ft.
Atlantic Oil Producing Co.'s No. 1 H. Pritchard, 330 ft. from N and E lines of lease, F. W. Johnson Sur. ....Derrick.
M. T. Beeler's No. 1 Finley and Thomas, 150 ft. from N and 150 ft. from W of 10-ac. lease, C. H. Alexander Sur. ....Waiting on cmt. to set 3,478 ft.
Will Brown's No. 1 E. Choice, 400 ft. due east of Collins' No. 1 H. T. Elder ....Derrick.
Canadian Oil & Production Co.'s No. 1 Hilburn, 994 ft. from S line and 313 ft. from W line of 40-ac. lease, Joseph Hay Sur. ....Drlg. 2,615 ft.
Carroll and Baine's No. 1 Griffin, SW offset to Magnolia's No. 7 Griffin, M. V. Winkle Sur. ....Top sand 3,543 ft.; T.D. 3,565 ft.
Continental Oil Co.'s No. 1 A. A. King, 330 ft. from N line and center of E and W lines of lease, M. Tennison Sur. ....Derrick.
D. D. Oil Co.'s No. 1 Adkins, 786 ft. due N of McLemore's No. 1 Adkins, D. Dainwood Sur. ....Rig up.
Danciger Oil & Refining Co.'s No. 1 Mattox, 330 ft. from N and W lines of 55.4-ac. lease, D. Sanches Sur. ....Waiting on cmt. to set 3,600 ft.
Dodd and Markey's No. 1 J. F. Holt, 615 ft. E and 707 ft. N of SW cor. of 200-ac. tract, H. Edwards Sur....Derrick.
Empire Gas & Fuel Co.'s No. 1 E. L. Walker, 400 ft. from S line and 220 ft. from E line of lease, John Tate Sur. ....Drlg. 2,715 ft.
Empire Gas & Fuel Co.'s No. 1 H. E. Thomas, 330 ft. from N line and E lines of lease, J. M. Morris Sur. ....Location.
Eslick and Bazzell's No. 1 J. H. Thomas, 225 ft. from N and S lines and 290 ft. from W line of N 15 acres of 65-ac. tract, H. F. Rogers Sur. ....Waiting on cmt. to set; T.D. 3,590 ft.

Lewis Godlin's No. 1 E. L. Walker, 330 ft. N of road, 330 ft. from E line of 80.2-ac. tract, M. Dillard Sur...Derrick.
S. A. Guiberson et al's No. 1 J. M. Christian, 150 ft. from W line and center N and S lines of 8.77-ac. lease, G. W. Hooper Sur. ....Location.
Hughes et al's No. 1 Louley et al, 500 ft. from S line and center of E and W lines of Lot No. 3, D. Dainwood Sur. ....Drlg. 2,160 ft.
Bob Jordan's No. 1 W. P. Crews, 275 ft. from S line and 330 ft. from E line of lease, J. B. Bradshaw Sur. ....Derrick.
Koberg Oil Co.'s No. 1 L. Martin, 330 ft. from S and W lines of 25-ac. tract, T. Johnson Sur. ....Derrick.
K. B. Oil Co.'s No. 1 Dickson, 150 ft. from S and 150 ft. from W of 5-ac. lease, Mary Van Winkle Sur....S.D. 700 ft.
Lovett-Norr et al's No. 1 Rufus Smith, 1,100 ft. from N line and 750 ft. from W line of lease, R. Slaughter Sur. ....Set surface csg.
Magnolia Petroleum Co.'s No. 1 J. W. Stone, 330 ft. from N and W lines of 66-ac. lease, D. Sanches Sur. ....Drlg. 3,561 ft.
C. L. Mahaney's No. 1 Mt. Culver Church, center of 4-ac. tract, J. Hay Sur. ....Drlg. 3,428 ft.
Miller and Lacy's No. 1 W. R. Nicholson, 330 ft. from S line and center of E and W lines of 39-ac. lease, M. Mann Sur. ....Drlg. 2,600 ft.
McVey et al's No. 1 Kelly Dixon, 140 ft. NW along corner line of street from E corner of Blk. No. 137 and 655 ft. SW at right angles, M. V. Winkle Sur...Rig up.
Newman et al's No. 1 A. V. Bacle, 426 ft. S and 250 ft. W of NW cor. of Barnsdall's McGrede lease, G. W. Hooper Sur. ....Rig up.
J. D. Patty et al's No. 1 J. C. McCormick, 207 ft. SE at right angles to Gladewater-Tyler road and 540 ft. SW of Abernathy and Kirkpatrick's No. 1 Gregston, M. Dillard Sur. ....S.D. 1,600 ft.
E. A. Payne et al's No. 1 R. M. Woods, 20 ft. from S line and 31 ft. from W line of 2.13-ac. lease, H. R. Holit Sur. ....Derrick.
Pennsylvania Oil & Refining Co.'s No. 1 Bonner, 693 ft. W and 330 ft. S of most easterly NE cor. of survey, James McRae Sur. ....Rig up.
Pruitt and Standberry's No. 1 M. B. Hughey, Blk. No. 150, Kilgore Townsite, Mary Van Winkle Sur. ....Derrick.
Reeves et al's No. 1 W. L. Hestland, center of five-eighths-acre tract, midway from Lampton Church and Sarson's No. 2 Hall, D. Sanches Sur. ....Derrick.
Frank Russell's No. 1 Crimm, center of one-half-acre tract, M. V. Winkle Sur. ....Derrick.
Shell Petroleum Corp.'s No. 1 H. T. Elder & Sons, 330 ft. from W line and center of N and S lines of lease, M. V. Winkle Sur. ....Top sand 3,534 ft.; T.D. 3,537 ft.
Shell Pet. Corp.'s No. 1 S. C. Fishborn, 330 ft. from N and E lines of 100-ac. lease, F. W. Johnson Sur....Drlg. 2,600 ft.
Simms Oil Co.'s No. 1 W. R. Nicholson, 330 ft. from N line and 284 ft. from E line of 801-ac. lease, M. Mann Sur. ....T.D. 3,613 ft.

XUM

Victor C. Smith's No. 1 Knowles, center of Blk. 134, Mary Van Winkle Sur. ..... Drlg. 2,780 ft.
Solar Exploration Co.'s No. 1 J. B. and F. Elder, 840 ft. E of Magnolia E line and 330 ft. from S line of Solar lease, M. V. Winkle Sur. ..... Testing 3,565 ft.
Stanolind-Simms et al's No. 1 Albright, 330 ft. from N and E lines of lease, W. H. Hart Sur. ..... Rig up.
Stroube and Stroube's No. 1 Finley and Thomas, 150 ft. from N line and 330 ft. from W line of 10-ac. lease, C. H. Alexander Sur. ..... Location.
Sun Oil Co.'s No. 1 M. Strong, 200 ft. from S line and 350 ft. from W line of lease, John Blair Sur. ..... Waiting on cmt. to set 3,365 ft.
Travis and Crosby's No. 1 K. P. Lodge Lot, 210 ft. S of Gulf's No. 6 Alexandria and 40 ft. from center line of road, M. V. Winkle Sur. ..... Drlg. 3,220 ft.
T. J. Tucker's No. 1 Mary Rufus, center of one-half-acre tract, Mary Van Winkle Sur. ..... T.D. 3,630 ft.
M. K. Towns' No. 1 Griffin Davis, W offset to Mullendore and Berry's No. 1 Davis, W. P. Chisum Sur. .... Drlg. 360 ft.
Turnbow et al's No. 1 Rodger Lacy, center of E half of Blk. No. 1, M. V. Winkle Sur. ..... Drlg. 3,300 ft.
Valentine Oil Co.'s No. 1 Goyne-Hughey, 6,100 ft. from S and 6,800 ft. from W of survey, Mary Van Winkle Sur. ..... Rig up.
C. William et al's No. 1 George Anderson, center of 2½-ac. lease, C. H. Alexander Sur. ..... Bldg. derrick.
H. E. Wrenn's No. 1 A. A. King, 150 ft. from S and E lines of 79-ac. lease, W. P. Chisum Sur. ..... Drill stem test 3,749-33 ft.; tested dry.
Zion Oil Co.'s No. 1 Barnett, 260 ft. from E and W lines and 330 ft. from south L of lease, E half of W 50 acres of 150-ac. tract, Jacob Taylor Sur. .... Bldg. derrick.

HILL COUNTY

Sherman-Houseman's No. 1 J. F. Griffith, in Samuel Waddell Sur. ..... S.D. 3,256 ft.

HOPKINS COUNTY

Roark et al's No. 1 Taylor, 220 ft. from N and W lines of 80-ac. tract in the John Polk Sur. ..... S.D. 540 ft.

HOUSTON COUNTY

Nelson's No. 1 Harron, 300 ft. out of NE cor. of 327-ac. tract, J. P. Procella Sur. ..... Spudded and S.D. 37 ft.
T. B. Roberts' No. 1 Pennington, 750 varas W of E line and 500 varas from S line of survey on 186-ac. tract, Ramond LaGarza Sur. ..... T.D. 2,660-66 ft.

HUNT COUNTY

Branson et al's No. 1 Gray ..... Location.
Russell et al's No. 1 Brooks and Quattlebaum ..... S.D. 1,455 ft.

JASPER COUNTY

Rio Neches Oil Co.'s No. 1 Boykin, 150 ft. from S and E lines of 160-ac. tract, R. Boykin Sur. ..... Rig up.

KAUFMAN COUNTY

Standy Darnell et al's No. 1 Sally Pannill ..... T.D. 1,628 ft.

LAMAR COUNTY

G. W. Davy et al's No. 1 McGustion, 450 ft. from S line, 450 ft. from W line of farm and survey, Galet Wood Sur. ..... S.D. 3,165 ft.
Doyle and Jondeau's No. 1 Martin, 990 ft. from N line and 330 ft. from E line of tract, Joseph Deck Sur. ..... Drlg. 1,875 ft.
Doyle and Jondeau's No. 1 Horn, 226 ft. from S line and 608 ft. from E line of lease, R. P. Mayor Sur. ..... S.D. 2,398 ft.

LEON COUNTY

Salzer Drlg. Co.'s No. 1 Dr. J. M. Blair, 1,010 ft. from N line, 1,986 ft. from W line, Sec. 19, Blk. E, Lucia Hibbard Sur. ..... Derrick on ground.

MORRIS COUNTY

Leonard's (Tucker-Fullwood) No. 1 P. M. Staggers, 450 ft. from N line and 150 ft. from E line of 65.5-ac. tract, J. D. Nelson Sur. ..... S.D. 3,535 ft.; set csg. 3,506 ft.
Merrill's No. 1 Walcott, 330 ft. from N and E lines of most northerly NE cor. of survey, 3 miles S of Carson, D. A. Russell Sur. ..... Moving in derrick.
Olvey et al's No. 1 Gabriel Silbey, 330 ft. from N line and about 500 ft. from W line of lease, 3½ miles NE of Carson, W. O. Matthews Sur. ..... Derrick.

NACOGDOCHES COUNTY

Adams et al's No. 1 Fuller Brothers, located in a 269-ac. tract, Jose Flores Sur. ..... Location.
Taylor-Vaughn's No. 1 Dixon Greer, 160 ft. from W and 450 ft. from N lines of 60-ac. tract in the M. G. Horrera Sur. ..... S.D. 265 ft.

POLK COUNTY

Sunshine Oil Co.'s No. 1 Brawley, 150 ft. from S line and 250 ft. from E line of W 100 acres of lease, F. Johnson Sur. ..... Derrick.
Taylor et al's No. 1 E. L. Duke, 330 ft. from N and W lines of 23.5-ac. tract, SW cor. of county, Peter J. Manard Sur. ..... Location.

RAINS COUNTY

C. H. Bayliss' No. 1 Ownby, 150 ft. N and 1,100 ft. from E of most easterly SE cor. of survey, Alexander Sur. ..... S.D. 4,036 ft.; to drill deeper.

RED RIVER COUNTY

Heffman and Henson's No. 1 H. H. Lennox, 2,790 ft. W and 300 ft. S of most easterly NE cor. of survey, J. E. Edmondson Sur. ..... S.D. 60 ft.
Concord Oil Co.'s No. 1 J. R. Dellahunty, 500 ft. from N of Isaac Moore Sur. and 200 ft. E of E line of Robert Glass Sur. ..... S.D. 2,546 ft. (corrected).

ROCKWALL COUNTY

Buccaneer Oil Co.'s No. 1 H. L. Lofland, center of 69-ac. tract in W. M. Bird Sur. ..... Set 10-in. csg. 120 ft.

RUSK COUNTY

Anderson et al's No. 1 E. B. Alford, center of Blk. No. 3, I. Parker Sur. ..... Waiting on cmt. to set 3,540 ft.
Brooks Petroleum Co.'s No. 1 Mayfield, Daniel Clark Sur. ..... Top sand 3,622 ft.; waiting on standard rig; would not flow; T.D. 3,702 ft.
Butler and Calhoun's No. 1 C. C. Lowe, 225 ft. from N line and 200 ft. from E line of 85-ac. lease, W. G. Tutt Sur. ..... Derrick.
Byrd-Frost's No. 1 Buckner, J. E. Peyton Sur. ..... T.D. 4,077 ft.; junked; will skid derrick.
Casey Oil Co.'s No. 1 E. B. Alford, center of 3-ac. lease, Isaac Parker Sur. ..... Drlg. 2,300 ft.
O. R. Cooper's No. 1 E. E. Moores, center of 1½-ac. lease, J. B. De Cadena Sur. ..... Waiting on cmt. to set 3,645 ft.
Everts Drilling Co.'s No. 1 Joe Lee, 330 ft. from N line and 400 ft. N and 330 ft. S of SW cor. of J. Crouch Sur. ..... Set cmt. 3,690 ft.
Fagin and Salmon's No. 1 Scroggins, 330 ft. from N and W lines of lease, E. Collard Sur. ..... S.D. 225 ft.
R. W. Fair et al's No. 1 Deason, 250 ft. from N line and 200 ft. from W line of 200-ac. lease, Juan Ximenes Sur. ..... Drlg. 3,555 ft.
Gant-Gerwin and Wegener's No. 1 L. A. Till, 330 ft. from N line and 464 ft. from W and E line of 26-ac. lease and tract, M. V. Pena Sur. ..... S.D. 3,663 ft.; would not flow through tubing.
Gant and Garwin's No. 1 W. P. Moore, 330 ft. S and E of SW cor. of Arkansas, W. P. Moore 40-ac. tract, M. V. Pena Sur. ..... Location.
J. Guinn's No. 1 Neal Cooper, center of Blk. No. 36, T. J. Moore Sur. ..... Derrick.
Hale and Hatchfield's No. 1 C. J. Goforth, 625 ft. from S line and 450 ft. from W line of 13.4-ac. tract, M. J. Pru Sur. ..... Rig up and S.D.
Harris and Russell's No. 1 T. W. Harris, 330 ft. from S line and 660 ft. from W line of most southerly SW cor. of 160-ac. tract, 3 miles SW of Henderson, W. G. Davis Sur. ..... Derrick.
Hasting and Dodson's No. 1 E. B. Alford, center of Blk. No. 27, T. J. Moore Sur. ..... Derrick.
Hathaway et al's No. 1 Gray, J. M. McLain Sur. ..... Preparing to set csg. 3,180 ft.
Heiden-Rodgerson et al's No. 1 Barton and Birdwell, N offset to Reisinger et al's No. 1 Barton, W. G. Tutt Sur. ..... S.D. 3,727 ft.
Holland et al's No. 1 S. E. Brox, 330 ft. from N line and 250 ft. from W line of 20-ac. lease, Thomas Grey Sur. ..... Rig up.
W. F. Hollifield's No. 1 Wylie, 160 ft. from W and E line and 330 ft. from S line of 10-ac. lease, Juan Ximenes Sur. ..... Waiting on cmt. to set 3,533 ft.
Jackson et al's No. 1 D. Florence, 330 ft. from S and E lines of lease, Joe English Sur. ..... Set surface csg.
W. C. Know's No. 1 W. D. Peterson, center of 3.75-ac. tract, Jacob Lewis Sur. ..... Drlg. 2,000 ft.
Magnolia Petroleum Co.'s No. 1 W. B. Key, 330 ft. from S line and 330 ft. from E line of 56.41-ac. lease, John Lindley Sur. ..... T.D. 3,786 ft.; to perforate csg.
McDonald et al's No. 1 J. H. Stewart, 171 ft. S and 158 ft. W of NW cor. of Humble W. P. Key 25-ac. lease, John Womack Sur. ..... Rig up.
McPhail and Kimbrough's No. 1 E. A. Thrash, 150 ft. from N and W line of 4-ac. lease, Juan Ximenes Sur. ..... T.D. 3,655 ft.
Meyer et al's No. 1 Tom Lacy, 350 ft. from N and W line of N 50 acres of 100-ac. tract, J. N. Sparks Sur. ..... Location.
Mid-Kansas Oil & Gas Co.'s No. 1 R. M. Weaver, 330 ft. from N line and 412 ft. from W and E lines of 40-ac. tract, W. J. Roan Sur. ..... Waiting on cmt. to set.
Mid-Kansas Oil & Gas Co.'s No. 1 Henry Clay estate, 370 ft. from S line and 330 ft. from W line of 43-ac. tract, M. V. Pena Sur. ..... Derrick.
Orita Oil Co.'s No. 1 Church, 175 ft. S and 175 ft. E of SE cor. of Sun-Schuler joint lease, J. B. De Cadena Sur. ..... Drlg. 2,710 ft.
Pace Petroleum Co.'s No. 1 Wells, W offset to East Texas, W. P. Chisum Sur. ..... Derrick.
Patterson Drilling Co.'s No. 1 W. N. Brightwell, center of 3.4-ac. tract, R. E. Winn Sur. ..... Set surface csg 102 ft.
Primrose Petroleum Corp.'s No. 1 W. P. Brett, center of N and S lines of lease, F. Cordova Sur. ..... Drlg. 2,815 ft.
J. C. Prine's No. 1 P. G. Warren, 155 ft. from S line and 96 ft. from E line of 44-ac. tract, John Womack Sur. ..... T.D. 3,759 ft.
D. B. Reed and Standard Supply Co.'s No. 1 Church, 121 ft. NE along SE line and 86 ft. NW at right angles, J. B. De Cadena Sur. ..... Drlg. 2,200 ft.
Ross Seward's No. 1 Burton, J. J. Y'Barbo Sur. ..... S.D. 3,077 ft.
Sabins et al's No. 1 J. R. Irion, 330 ft. from S and E line of 2-ac. tract, John Womack Sur. ..... Rig up.
H. G. Sampson's No. 1 Goforth, 200 ft. NE along road from most northerly NE cor. of Cloud's lease and 50 ft. S at right angles ..... Fishing; T.D. 3,829 ft.
W. M. Shaw's No. 1 E. B. Alford, center of Lot No. 35, T. J. Moore Sur. ..... Drlg. 3,530 ft.
Jay Simmon's No. 1 D. C. Joyner, 2,050 ft. from S line and 300 ft. from W line of 74.11-ac. tract, F. Cordova Sur. ..... Derrick.
Spansco Oil Co.'s No. 1 E. B. Alford, center of Blk. No. 43, T. J. Moore Sur. ..... Drlg. 3,589 ft.
Stidham and Thrasher's No. 1 W. P. Keeling, 389 ft. E of Philmack Oil Co.'s No. 1 Keeling, F. Cordova Sur. ..... Preparing to spud.
Sun Oil Co.'s No. 1 Ellen Till, 330 ft. from S line and 206 ft. from W line of 126-ac. tract, M. C. Pena Sur. ..... Location.
Taubert and McKee's No. 1 Tolliver, 150 ft. from W line and E offset to Ward's No. 5 Giles and center of N and S lines of lease, Juan Ximenes Sur. ..... Drlg. 2,500 ft.
Texas State Oil Co.'s No. 1 R. G. Mason, 171 ft. from N line and 122 ft. from E line of 2⅝-ac. lease, J. B. De Cadena Sur. ..... Moving in rig.
Tex Jersey Oil Co.'s No. 1 Cora Hannah, center of 6-ac. lease, J. B. De Cadena Sur. ..... Derrick.
Weaver-Crim's No. 1 F. Bean, 175 ft. from NW line and 212 ft. from S line of 16-ac. lease, Mary Cogswell Sur. ..... Rig up.

JOINER POOL—RUSK COUNTY

Paulett et al's No. 1 Ed Sparks, 350 ft. from E, 150 ft. from S of survey, L. C. Riggs Sur. ..... S.D. 1,465 ft.

SAN AUGUSTINE COUNTY

A. H. Jones and Tennant's No. 1 A. P. Davis ..... Drlg. 3,820 ft.

SMITH COUNTY

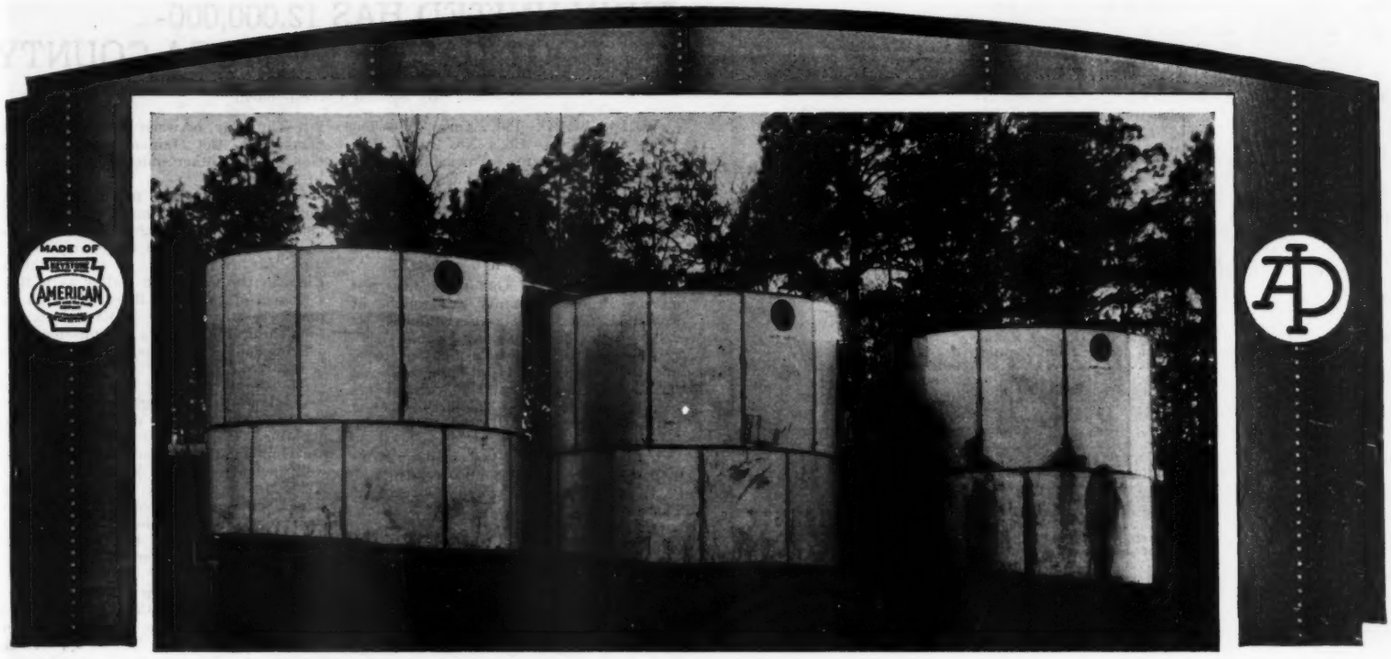
Hawkins and Sutton's No. 1 Church, 345 ft. from S line and center of E and W lines of 8.73-ac. lease, James Jordan Sur. ..... Preparing to set csg.; T.D. 3,812 ft.
J. E. Lucas' No. 1 Henry Jackson, 150 ft. from N and E lines of 25-ac. tract, James Jordan Sur. .... Set surface csg.
R. J. McMurray's No. 1 Frank Cole, 330 ft. from E line of lease and center of N and S lines of N 10.20-ac. lease, E. Daniels Sur. ..... Derrick.
Quintella McCullough's No. 1 Jessie Cole, 200 ft. from S line and center of E and W lines of 6-ac. lease, J. Jordan Sur. ..... S.D. 3,000 ft.
Sun Oil Co.'s No. 1 St. Clair, 330 ft. from N and E lines of 100-ac. tract, Juan Vargus Sur. ..... Drlg. 3,701 ft.
C. K. West's No. 1 L. S. Sartain, 1,112 ft. from W line and 330 ft. from E line of 76-ac. tract on NE 21-ac. lease of tract, James Jordan Sur. ..... Derrick.

TITUS COUNTY

Perry V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. ..... T.D. 4,212 ft.

UPSHUR COUNTY

Conservative Oil Co.'s No. 1 C. J. Mackey, 550 ft. from E line and 330 ft. N from center of highway, S. Harrell Sur. ..... Drill stem test, 700 ft. and 200 ft.; salt water; T.D. 3,715 ft.
Flanigan Production Co.'s No. 1 Whitehurst, 330 ft. from N and E lines of N 30 acres of W 40 acres of 100-ac. tract, McKinney and Williams Sur. ..... Coring 3,605 ft.
Grover Hart's No. 1 Allen, 330 ft. from S and E lines of lease, one-half mile W of Mountain, Gonzales Sur. ..... Derrick.
Hill Kimsey's No. 1 D. F. Smith, 466 ft. from S line and 1,165 ft. from E line of 266-ac. tract, J. R. Davis Sur. ..... Derrick.
Pat Hudson et al's No. 1 D. F. Smith, 330 ft. out of SE cor. of W 100 acres of the N 200 acres of the 272-ac. lease, 3 miles E and 1⅛ miles N of Cranfill & Reynolds' No. 1 Rash, John Denson Sur. ..... Waiting orders 3,71: ft.
Island Oil Co.'s No. 1 Bonner Estate, 330 ft. from E line and center of N and S lines of lease, James McRae Sur. ..... Set surface csg.
J. C. McFarland et al's No. 1 Willie Starr, center of S 40 acres of Starr 96-ac. tract, Charles Cooper Sur. ..... S.D. 3,523 ft.
Pitts et al's No. 1 H. Davis, center of 7.5-ac. lease, W. R. Stephens Sur. ..... Derrick.



Three 500-Bbl. Maloneys used by Jackson, Wise and Snedden at Overton, Texas. Erected by Maloney Sales Co., Distributers.

Make More Money...by using Maloney *Vapor-Pressure* Tanks to Stop Evaporation Waste

Our *Vapor-Pressure* Tanks are built to eliminate evaporation waste. They hold the vapor pressures generated within the tanks under ordinary conditions, and thus save the valuable lighter fractions which would otherwise be lost into the air. Since you are in the oil producing business to make money, you should use money-making tanks.

Notable features in our *Vapor-Pressure* Construction are: not less than 12-gauge rust-resisting Keystone Copper Steel; heavy 2″ angle ties and reinforcements; combination valves set at 16 ounces pressure and ½ ounce vacuum; and our special aluminum paint, made with a spar vehicle containing water-proof and alkali-proof Inhiburine.

"Alone in Quality"

MALONEY TANK MFG. COMPANY . . . . 38 N. Peoria Ave., TULSA, OKLA.

Packed in Steel-Bound Crates for Export ***Distributers at All Principal Petroleum Points***

Pitts' No. 1 Henrietta Davis, W. R. Stevens Sur., center of 7-ac. tract ..... Location.
A. A. Trammell et al's No. 1 E. H. Hampton, 330 ft. from S and E line of S 60 acres of E 150 acres of 192-ac tract, William King Sur. ..... Top sand 3,686 ft.; S.D. 3,688 ft.
L. E. Trout et al's No. 1 O. M. Victory, 330 ft. from S and E lines of 60-ac. lease, E. A. J. Evans Sur. ... Derrick.
Webster's No. 1 R. H. McClelland, 1,956 ft. E and 385 ft. S of NW cor. of 751-ac. tract, M. P. Del Torres Sur. ..... Derrick.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 225-ac. tract, 3½ miles S of Canton, M. J. DeCadena Sur. ..... S.D. 2,405 ft.
Kelly O. & G. Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ..... S.D. 2,300 ft.
Pure Oil Co.'s No. 1 R. M. Butler, 650 ft. W of E line and 150 ft. S of N line of lease, David Rose Sur. ..... Location.
Pure Oil Co.'s No. 1 D. F. Cade, 150 ft. N of S line and 150 ft. W of E line of lease, Nacogdoches County School Land ..... Plugged and abnd. 3,036 ft.
Pure Oil Co.'s No. 1 N. E. Clark, 150 ft. S of extreme N line and midway between E and W lines, John Walling Sur. ..... Drlg. 2,296 ft.
Pure Oil Co.'s No. 2 Mrs. C. White, 250 ft. S of N line and 690 ft. E of W line of lease, John Walling Sur. ..... Cmt. setting 307 ft.
Pure Oil Co.'s No. 3 J. F. Crim, 200 ft. W of E line and 250 ft. S of N line of lease, John Walling Sur. ..... Drlg. 960 ft.
Pure Oil Co.'s No. 4 D. R. Howell, 667 ft. S of N line and 650 ft. E of W lines of lease, H. V. Moore Sur. ..... Drlg. 1,420 ft.
Pure Oil Co.'s No. 5 L. M. Brawner, 200 ft. S of N line and 1,572 ft. W of E line of lease, John Walling Sur. ..... Location.
Pure Oil Co.'s No. 5 W. H. Cooke, 350 ft. SW of well No. 2 and 140 ft. N of S line of lease, Mund Gross Sur. ..... Cmt. setting 2,749 ft.
Pure Oil Co.'s No. 9 A. R. Tunnell, 644 ft. N of S line and 250 ft. W of E line of lease, John Walling Sur. ..... Cmt. setting 2,975 ft.
Van Oil Association's No 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Vanders Sur. ..... T.D. 2,850 ft.

WOOD COUNTY

Talko Oil Co.'s No. 1 G. T. Ross, B. L. Smith Sur. ..... S.D. 2,794 ft.
Wood County Dev. Co.'s No. 1 Davis, approximately 180 ft. from S line of 160-ac. tract and 2¼ miles S of Kantes in Sarah McDonald Sur. ..... Moving in rig.

PENN UNITED HAS 12,000,000-FOOT GASSER IN TIOGA COUNTY

By Special Correspondent

WELLSBORO, Pa., Apr. 30. — The Penn United Gas Co.'s No. 2 Ida Russell, in Farmington Township, Tioga County, when 4 feet in the Oriskany sand, topped at 4,104 feet, started producing gas at the rate of 8,000,000 feet per day. It was rated as a 12,000,000-foot well, when fully drilled in. No. 1 Ida Russell was also a big gasser.

The Penn United Gas Co.'s deep test on the Bradford County fairgrounds at Towanda, Pa., has been abandoned at 6,310 feet. The company would have drilled deeper in this hole, but one cave-in after another delayed progress and finally a cave-in at about 300 feet off bottom was such that the drilling crew could not cope with it and after three months' work gave it up. The test is estimated to have cost the company $70,000. This was the fifth unsuccessful test in Bradford County, which lies east of Tioga County.

Penn United Gas Co. was to have drilled in No. 1 Fletcher this afternoon following the scheduled completion of preparations which started early Friday.

The top of the lime was struck in this well at 4,023 feet and casing was run to 4,025 feet. It was expected that about 20 feet of lime strata remained to be drilled before the Oriskany was penetrated.

North Branch Development Co. today reported that No. 1-B Colgrove of that company located in Lawrence Township eastern end of the Tioga Field, was to be capped with a 4,000,000-foot flow of gas. The well was reported 12 feet in the Oriskany sand. No other projects in the field were reported near the pay sand today.

Outlet for Rathbone Field

A contract for the sale of gas from the Rathbone Field has been signed after weeks of negotiations, it was announced late Thursday, between the Southern Tier Gas Corp., the Hammondsport Natural Gas Co. and other independent operators in the field.

George Donovan, president of the Southern Tier Corp., made the announcement and the following explanation: The contract calls for the construction of a pipe line from Bath to the Rathbone Field in the Coshocton Valley as well as a system of gathering lines. Work on the line is to start within 30 days from any time the Public Service Commission gives official sanction to the arrangements, it is reported.

The Southern Tier Corp. under the new plans will buy gas from seven of the 12 producing wells in the field, it was explained. The contract includes gas from the Hammondsport company's acreage as well as from holdings leased by Wright, Kriz, Mays and Barry. Agreements now signed will take gas from the two Sovocool wells, the No. 1 Sherwood, the Alvah Allen discovery well, the No. 1 Lewis Hill, No. 1 Ervie Allen and No. 1 Risley wells.

Another Deep Failure

The Allegany Gas Co. has abandoned as a failure its test on the W. A. Davey farm in Richmond Township, Tioga County, at 5,684 feet, and has set casing at 4,209 feet in No. 1 Cramer, in the Hebron district, western Potter County.

The North Branch Development is drilling at 900 feet in No. 1 Murray, Lawrence Township, Tioga County.

The Mid-East Oil & Gas Co. was cementing at 4,703 feet in No. 1 V. B. Hughes, Tioga Township, Tioga County.

Williamsport Natural Gas has rig up for a test on the Nugent farm, Hebron district, Potter County.

Sloan & Searle have foundation in for No. 1 Amos Stutevant, in Hebron Township and are moving in on the Rodgers farm in the same district.

ROCKY MOUNTAIN RUNS

Average daily pipe line runs from fields in the Rocky Mountain territory for the week ended April 30 follow:

	Bbls.
WYOMING	
Salt Creek	22,560
Badger Basin	50
Big Muddy	1,670
Byron-Garland	240
Dallas-Derby	580
Dutton Creek	...
Elk Basin	630
Ferris	20
Frannie	1,950
Grass Creek	2,000
Hamilton Dome	730
Hudson	430
LaBarge	1,980
Lance Creek	100
Lost Soldier	2,400
Midway	70
Oregon Basin	910
Osage	950
Pilot Butte	30
Rock River	1,670
Poison Spider	90
Teapot	10
Total Wyoming	39,070
MONTANA	
Buckley-Border	640
Cat Creek	880
Dry Creek	320
Kevin-Sunburst	3,350
Lake Basin	60
Pondera	1,340
Total Montana	6,590
COLORADO	
Florence	360
Fort Collins	870
Iles	810
Moffat	740
Orchard	360
Rangely	90
Tow Creek	300
Total Colorado	3,530
NEW MEXICO	
Rattlesnake	670
Hogback	480
Table Mesa	70
Artesia	596
Cap Rock	885
Hobbs	30,515
Jal	835
Lea City	2,012
Eunice	510
Texas Pacific	85
Total New Mexico	36,658
Total Rocky Mountain area	85,848
Total previous week	86,271
Difference	423

EAST TEXAS FIELDS

(Continued from Page 42)

feet. Stanolind Oil & Gas Co.'s No. 2 R. J. Burton, top sand 3,647 feet, initial production 67 bbls. in 20 minutes through open tubing, total depth 3,695 feet. Stoddard and Delaney's No. 2 L. J. Pinkston, top sand 3,648 feet, initial production 50 bbls. per hour through three-fourths-inch tubing choke, total depth 3,690 feet. Tex-Jersey Oil Co.'s No. 3-A W. P. Keeling, top sand 3,763 feet, initial production 90 bbls. per hour through open tubing, total depth 3,795 feet.

Tulsa Oil Co.'s No. 3 Wheelis, top sand 3,803 feet, initial production 37 bbls. in one-fourth hour through open tubing, total depth 3,808 feet. Venable and McClanahan's No. 8 J. A. Birdwell, top sand 3,598 feet, initial production 60 bbls. in 20 minutes through open tubing, total depth 3,626 feet. Ward Oil Co.'s No. 5 Giles, top sand 3,693 feet, initial production 41 bbls. per hour through open tubing, total depth 3,732 feet. C. K. West's No. 2 Cole, top sand 3,721 feet, initial production 76 bbls. in one-half hour through open tubing, total depth 3,726 feet.

Smith County

Bunte and others' No. 2-B Jarvis, top sand 3,695 feet, initial production 50 bbls. per hour through 1-inch tubing choke, total depth 3,698 feet. C. B. Munte and Droppleman's No. 2 G. Patterson, location abandoned. J. R. Gaskey's No. 1 S. S. Cooke, top sand 3,769 feet, initial production 150 bbls. per hour through open tubing, total depth 3,773 feet. J. E. Lucas and Hobb's No. 1 L. S. Sartin, top sand 3,794 feet, initial production 40 bbls. per hour through one-fourth-inch tubing choke, total depth 3,796 feet. Pinegrove Oil Co.'s No. 3 S. S. Cooke, top sand 3,713 feet, initial production 67 bbls. per day pinched through tubing, total depth 3,717 feet. Professional Oil Co.'s No. 2 T. O. Wright, top sand 3,674 feet. initial production 35 bbls. per hour through open tubing, total depth 3,704 feet.

Sinclair-Prairie Oil Co.'s No. 7-C Jarvis, top sand 3,691 feet, initial production 85 bbls. in one-half hour through open tubing, total depth 3,696 feet; No. 3 Patterson, top sand 3,734 feet, initial production 65 bbls. per hour through open 2½-inch tubing choke, total depth 3,737 feet. E. W. Stewart's No. 1 McDavis, top sand 3,741 feet, initial production 15 bbls. per hour through one-fourth-inch tubing choke, total depth 3,743 feet. Sun Oil Co.'s No. 2 R. L. Henson, top sand 3,718 feet, initial production estimated 35 bbls. per hour through open tubing, total depth 3,725 feet; No. 3-B H. A. Pace, top sand 3,730 feet, initial production 72 bbls. per hour through tapered tubing, total depth 3,732 feet. The Texas Company's No. 6 Blackwell, top sand 3,683 feet; initial production 40 bbls. per hour through three-fourths-inch tubing choke, total depth 3,699 feet. Tulsa Oil Co.'s No. 1 M. L. Thompson, top sand 3,609 feet, initial production 80 bbls. per hour through open tubing, total depth 3,622 feet.

Upshur County

Barkley and Lincoln's No. 3 J. B. Wells, top sand 3,710 feet, initial production 30 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,727 feet. Cal-Pet Corp.'s No. 3 W. F. Glenn, top sand 3,656 feet, initial production 80 bbls. per hour through open tubing, total depth 3,685 feet. Humble Oil & Refining Co.'s No. 4 E. Edwards, top sand 3,602 feet, initial production 46 bbls. per hour through three-fourths-inch tubing choke, total depth 3,645 feet; No. 2-A Eva O'Bryne, top sand 3,649 feet, initial production 16 bbls. per hour through three-fourths-inch tubing choke, total depth 3,670 feet. Mudge Oil Co.'s No. 7-A G. W. Free, top sand 3,628 feet; initial production 67 bbls. per day through various chokes, total depth 3,660 feet. Sun Oil Co.'s No. 5 Hergroves, top sand 3,727 feet, initial production 34 bbls. per hour through tapered tubing, total depth 3,737 feet.

EAST COAST GASOLINE VOLUME IS INCREASING

(Continued from Page 29)

429,179 bbls. for the four weeks ended April 23. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast Ports—	
Baltimore	319,000
Boston	278,000
New York	1,788,000
Philadelphia	237,000
Others	386,000
Total	3,007,000
Daily average	429,571
At Gulf Coast Ports—	
New Orleans and Baton Rouge	327,000
Total	327,000
Daily average	46,714
At Atlantic and Gulf Coast Ports—	
Total	3,334,000
Daily average	476,285
Daily average four weeks	429,179

Distribution of total imports is as follows:

Crude	2,062,000
Gasoline	527,000
Fuel oil	682,000
Road oil	63,000

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic and Gulf Coast ports for the week ended April 23 totaled 211,000 bbls., a daily average of 30,143 bbls., compared with 160,000 bbls., a daily average of 22,857 bbls. for the week ended April 16 and a daily average of 30,464 bbls. for the four weeks ended April 23. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast Ports—	
New York	95,000
Philadelphia	116,000
Total	211,000
Daily average	30,143
At Gulf Coast Ports—	
All ports	None
At Atlantic and Gulf Coast Ports—	
Total	211,000
Daily average	30,143
Daily average four weeks	30,464

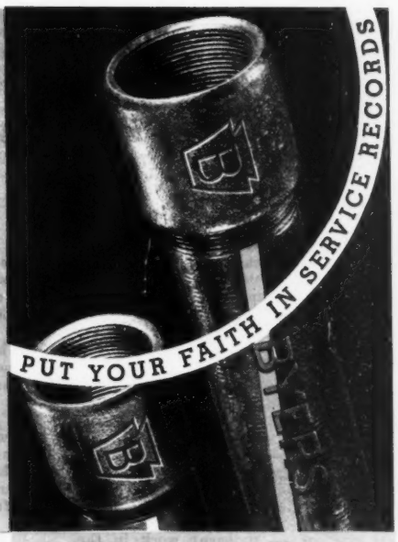
All of the week's receipts were of gasoline.

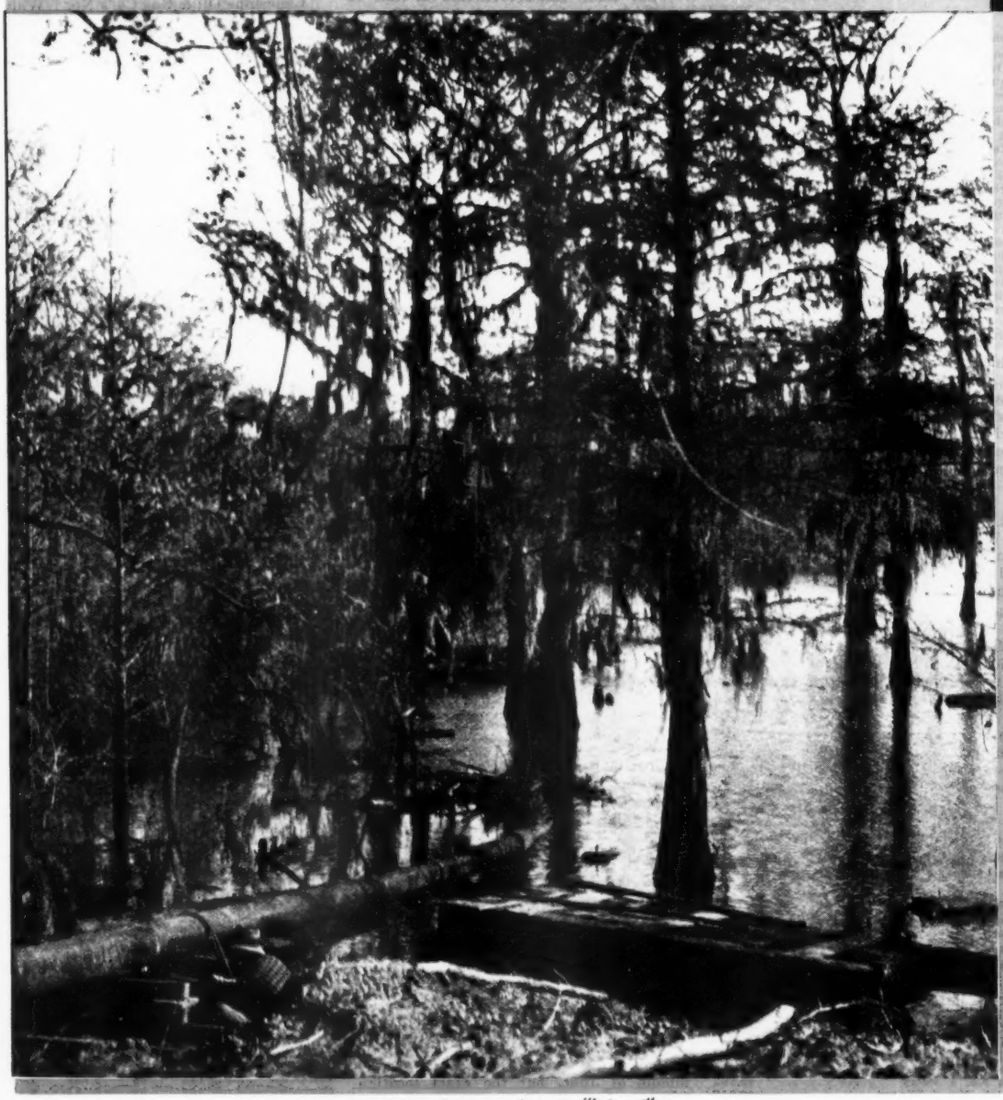
Only one cargo of California refined petroleum was reported cleared during the week for the East Coast, the tanker Los Angeles with 70,700 bbls. of gas oil for Baltimore. The Los Angeles is a Union Oil Co. tanker and the shipment is on a standing contract which Union holds with the Baltimore gas manufacturing company.

GREGORY ROWE DIES

WICHITA FALLS, Tex., May 2.—J. Gregory Rowe, 51, well-known operator and contractor of Wichita Falls, died early Friday morning, April 29, at a Marlin Hospital.

Comparative Test in "HOT SPOT" *proves* WROUGHT IRON'S SUPERIORITY





A typical southwestern oil country "hot spot"

A LARGE pipe line company determined to find out the comparative corrosion-resistance qualities of genuine wrought iron and another pipe material. A line of each was laid parallel through widely varying soil conditions. In two sections of the line, corrosion was unusually aggressive.

Careful records, after a relatively few years, clearly revealed the superiority of genuine wrought iron over the other pipe material when used in the same, identical conditions. There was no need for replacing or patching a single foot of the wrought iron, whereas much of the other material failed completely and had to be patched or replaced.

Upon such evidence as this we say to you, "Put your faith in service records." They show, as only comparative tests in the field can, the long-time economy of genuine wrought iron—its ability to withstand the most severe "hot spot" conditions.

Through Byers modern manufacturing methods, which permit closest control of every step in manufacture, Byers Genuine Wrought Iron is better today than ever before. Ask a Byers oil country engineer to show you this comparative service record. This factual data is valuable to you in solving your "hot spot" problems. A. M. Byers Company, Pittsburgh, Pa. Established, 1864.

BYERS GENUINE WROUGHT-IRON PRODUCTS

PIPE CASING • COUPLINGS • NIPPLES WELDING ELBOWS • SPECIAL BENDING PIPE
BAR IRON • TUBING • PLATES • SHEETS • BILLETS

STANDARD of QUALITY for 68 YEARS • • TODAY BETTER THAN EVER

New Producing Spots in Seminole Area

Promising Discoveries in Hughes, Seminole and Pottawatomie Counties. Oklahoma Production Takes 70,000-Bbl. Drop

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

A community wildcat in Section 25-6-4, in the southeastern part of Pottawatomie County, is believed to have opened a new producing area in the Greater Seminole district. This well, which is located about 5 miles southwest of the Carter Oil Co. and others' wildcat well in Section 35-7-4, assures that part of the State considerable development work in the near future. Interest continued brisk in the two areas and several new locations are expected to be announced soon.

Barnsdall Oil Co. and others' No. 1 Gray, NE cor. SW, Section 25-6-4, is an important discovery in the Simpson sand. It flowed 135 bbls. of oil in one hour, indicating the well had an initial potential of approximately 3,000 bbls. a day. The big production was found in the pay at 3,478-90 feet. The well also made a number of small flows of oil from shallower depths, as the top of the Simpson sand was found at 3,339 feet.

Magnolia Petroleum Co. is preparing to enter the area and drill a test well in either the NE cor. NW, Section 36-6-4, or the NW cor. NE, Section 36-6-4. The company owns two short term leases in the area and both are south of the Barnsdall discovery well.

In the Monett area, surrounding the Carter Oil Co. and others' No. 1 Monett, SW cor., Section 35-7-4, which was first listed as a discovery well and later changed by the state umpire to a south extension to the St. Louis Pool, three offsets are drilling. Another semiwildcat test was announced east of this well, H. H. Taylor and others' No. 1 Bean, SW cor. NW, Section 36-7-4, on a 290-acre block in which several companies and independent operators are interested in the location. If the test makes a commercial well it will cause Phillips Petroleum Co. to drill the southwest offset and Magnolia Petroleum Co. to drill the south offset. This development is the result of an intensive geological and seismograph survey of the territory.

The finding of a showing of oil in the Hilton Phillips and others' No. 1 Phillips, SW cor. NW, Section 2-14-3, Lincoln County, indicates that another oil pool may be opened in that county. The test found water and oil in the Viola lime at 5,045-53 feet, where it was drilling on the last reports.

The approach of water in the Wilcox sand zone in the Oklahoma City Field may retard the development in the southwest part of that field. Skelly Oil Co.'s No. 1 Ledbetter, NE cor. NW NE, Section 22-11-3w, a well that extended the production in the southwest part of the field, was opened during the week and flowed 138 bbls. of oil an hour for three hours and was shut in again. The production was showing 5 per cent water. When the well was first completed it made 1,282 bbls. of oil in four hours from the Wilcox sand at 6,455-93 feet, and no water.

Big Decline in Production

The daily average production from the State of Oklahoma for the week ending April 30, was approximately 398,600 bbls., a decline of nearly 70,000 bbls. from the previous week. A large part of the decline was in the Oklahoma City Field which averaged 88,300 bbls. a day for the seven days compared to 137,948 bbls. the previous week.

Crude oil demand from the Oklahoma City Field during the month of May shows an increase. Purchasing companies nominated approximately 105,000 bbls. of oil a day, which is an increase of 4,000 bbls. over the previous nominations, which were 101,000 bbls. for the last half of April. The daily average shipments for the 10 days ending April 26 were 103,835 bbls.

May Nominations

Nominations for the month of May, compared to the last half of April and the daily average production from the Oklahoma City Field for the 10-day period from April 16 to 26, were as follows:

Company—	May nom.	Old nom.
Champlin	2,141	950
Continental	2,000	2,000
Empire	20,000	18,000
Globe	8,000	8,000
Magnolia	5,500	5,500
Oklahoma	24,000	25,000
Shell	2,500	3,500
Sinclair-Prairie	7,500	7,500
Stanolind	18,000	18,000
Tidal	200	270
Canadian	500	.....
Capitol P. & R.	80	81
Century	1,100	1,500
I. T. I. O.	7,000	5,000
Peacock	300	500
Petroleum	1,500	1,500
Independent	2,500	2,500
White Oak	1,500	.....
Sterling	500	.....
Major Petroleum	250	250
Total	105,071	101,051

The Corporation Commission ruled that certain producing wells in the Oklahoma City Field unable to make allowables on April 1 be given 30 days in which to recondition and make up the underproduction. The Indian Territory Illuminating Oil Co.'s No. 1 Mount Vernon, No. 4 Spillman, No. 1 Holmes-Gray and No. 1 Magnolia Heights were exempt. Wirt Franklin Petroleum Corp.'s No. 7 Theimer was also exempt. Other companies owning such wells were advised to have written applications for extension filed before May 1.

There were 17 wells named in the original petition filed by Ray M. Collins, the field umpire, with a total underproduction of 163,104 bbls. on March 16. The total underproduction as of April 26 was estimated at 168,062 bbls. indicating that some of these wells were unable to make or keep even with the allowable production during the last periods, notwithstanding the gains made by a few of the wells.

Underproduced Wells

The status of the wells, showing the amount of underage on April 26, was as follows:

Company and well—	Underage
Anderson-Prichard's No. 1 Graham*	†21,721
Argood's No. 1 Catalina*	†11,647
Coline's No. 8 Clauer*	1
Franklin's No. 7 Theimer*	†7,049
I. T. I. O.'s No. 1 Banta	†19,657
I. T. I. O.'s No. 1 Foster	†3,742
I. T. I. O.'s No. 1 Holmes-Gray*	†14,027
I. T. I. O.'s No. 2 Ivanhoe	†5,520
I. T. I. O.'s No. 1 Magnolia Heights*	†3,592
I. T. I. O.'s No. 1 Vernon	39
I. T. I. O.'s No. 4 Spillman*	23,867
Shell's No. 2 Petty	†3,377
Shell's No. 5 Petty	†3,563
Sinclair's No. 4 Kinter	†3,912
Sinclair's No. 7 Kinter	†3,896
Slick's No. 1 Hoopes*	†28,993
Slick's No. 5 Hoopes*	19,478

*Denotes wells making 3 per cent or more water. †Denotes wells which show increased underage during the period.

The commission permitted owners of 12 wells, now reported to be unable to make their allowances, until June 1 to make up their underproduction by producing to full capacity. If they are unable to make up the underage or make their daily allowable flow, the underproduction will be stricken off. The wells with their underage as of April 16 were as follows:

Company and well—	Underage
Anderson-Prichard's No. 1 Orphanage	6,284
I. T. I. O.'s No. 4 Ferndale*	16,011
I. T. I. O.'s No. 1 M. Reynolds	2,419
I. T. I. O.'s No. 7 Trosper*	14,328
I. T. I. O.'s No. 3 Trosper*	6,290
I. T. I. O.'s No. 6 Trosper*	13,988
I. T. I. O.'s No. 7 Trosper*	7,337
Peacock's No. 1 Shepherd	9,724
Scott's No. 1 Ashby*	5,573
Slick's No. 1 Hussman*	22,890
Slick's No. 1 Page	7,009
Slick's No. 2 Page*	12,138

*Denotes wells making 3 per cent or more water.

The total underproduction of the 12 wells listed above as of April 16, was 123,991 bbls. The allowable of these wells was 135,361 bbls. and the actual daily average production on a 10-day period was 11,380 bbls.

Phillips Petroleum Co. and Shell Petroleum Corp.'s No. 1 Berg, NE cor. SW, Section 26-11-3w, which extended the production in the Oklahoma City Field a half mile to the south, was opened April 27, and flowed 50 bbls. in two hours from sand at 6,420-6,573 feet. After making the 59 bbls. of oil the well stopped flowing.

On the west side of the field, Slick-Urschel, Inc.'s No. 9 Classen-Edwards, NW cor. SW SW, Section 3-11-3w, flowed 152 bbls. of oil in 3 hours and 40 minutes. No estimate was made of the gas. The Wilcox sand was found at 6,450-97 feet. Same operators' No. 4 Frisco, NW cor. SE, Section 3-11-3w, flowed 1,953 bbls. of oil in 3 hours and 40 minutes. The gas was estimated at 82,000,000 feet a day. The oil and gas were found in the Wilcox sand at 6,273-6,375 feet. It is believed that these wells, which are located on the extreme west edge of the field, indicate that the western limits of the field may be close by.

The umpire's office stated that there would be 712 wells, with a total adjusted potential of 3,450,717 bbls. daily, available for production during the month of May. Of this number 99 wells were making 3 per cent or more water.

It is estimated the production for April from the Oklahoma City Field was 3,121,620 bbls. and the pipe line shipments 3,115,050 bbls. Stocks as of May 1 were estimated to be 549,429 bbls., as against 542,859 bbls. on April 1. Current underproduction as of May 1 was estimated at 283,014 bbls. The net allowable for the month of April was 3,404,634 bbls. The umpire's office also estimated there would be approximately 13 wells completed during May and that they would produce a potential initial average of 2,548 bbls. per well.

Holdenville Field

The Holdenville area in Hughes County is assured of a Wilcox sand test which has resulted in the leasing of more than 300 acres of land in the vicinity of the townsite surrounding the test and inside the city limits. The test is expected to be made in Section 1-7-8, northeast of the Head and others' test on the Breeding farm in Section 12-7-8.

Drilling is expected to start by the middle of June, but the exact location has not been decided. The leases are being secured with the understanding that a Wilcox sand test will be drilled on the block. The sand is expected at about 4,200 feet. The largest single piece of acreage in the block is the 120 acres belonging to the Hardwick estate.

Tools were moving into the Head and others' No. 1 Breeding, SE cor. NE NW, Section 12-7-8, Hughes County, and drilling is expected to start in a few days. The test is located about a half mile north of the Holdenville city limits.

Eason Oil Co.'s No. 1 Huggins, C NW SE, Section 1-7-8, located about 2 miles north of the Holdenville city limits, is expected to reach the Cromwell sand in a few days.

Limestone Oil & Gas Co. and others' No. 1 Watkins, C NE NE, Section 15-7-8, about 2 miles west of Holdenville, has resumed drilling. It was shut down at 730 feet for several weeks.

The rig has been erected for Mid-Continent Petroleum Corp.'s No. 1 Jacobs, NW cor. NE SW, Section 9-7-8, and drilling is expected to start in the near future. It is an offset to the same company's No. 1 Woodford which was completed as a good producer.

Limestone Oil & Gas Co.'s No. 1 Whiteley, NW cor. SE NE, Section 14-7-8, west of Holdenville, has been temporarily shut down and it is not known when work will be resumed.

In the eastern part of the county, Redwine and others' No. 1 in the SE cor. SW, Section 14-5-11, is spudding. It is expected to be drilled to the shallow gas sand at approximately 1,000 feet.

Calvin Sand Shut Down

The proration agreement covering the Calvin sand oil curtailment in the East Earlsboro Pool, in Seminole County, and in West Seminole Field, both in the Greater Seminole area, which was discovered through plugging back Wilcox sand wells that were exhausted producers, provides for a delay in drilling of 30 days, or until June 1, and a shutting in of Calvin sand producing wells. This was decided at a meeting of operators. The first agreement was made soon after several of the Wilcox sand producers were plugged back to the Calvin sand and made large wells. It was first agreed that these wells would remain shut in until May 1.

The production of the Conservation Pool, in Pontotoc County, is being prorated according to pipe-line demand. The pool is producing and shipping approximately 500 bbls. a day, which is the pipe line demand. The potential production of the pool was 650 bbls. April 15. Ten-day gauges are being taken at this time to determine the potential of the area. The development of the district has shown a tendency to increase, but it is believed that drilling will be conducted in a conservative manner.

Seminole's Potential

The potential of the Greater Seminole area is placed at 321,794 bbls. a day, exclusive of the Calvin sand production in the East Earlsboro Pool. The estimated potential of the different fields is as follows:

Pools—	Stripper prod.	Class A	Class B	Total pot.
Allen	245	70	18,140	18,455
Asher-Wanette	118	110	9,112	9,340
Bowlegs	60	114	26,023	26,197
Carr City	26	....	26,579	26,605
Earlsboro	456	323	23,550	24,329
E. Earlsboro	7	76	20,242	20,325
S. Earlsboro	11	....	6,642	6,653
E. Earlsboro Ex.	....	....	512	512
Earlsboro Townsite	28	30	3,458	3,566
Konawa	96	193	12,331	12,620
Little River	361	223	39,254	39,838
E. Little River	44	33	4,132	4,209
Maud	781	2,598	.....	3,379
Mission	85	64	15,639	15,788
Sasakwa	163	96	2,498	2,757
Searight	154	89	6,594	6,837
Seminole	164	112	24,004	24,280
E. Seminole	37	35	2,335	2,407
St. Louis	880	321	33,942	35,643
Total	3,716	5,037	274,987	283,740
Class C Pools				
Fish	...	....	.....	24,780
W. Seminole	...	....	.....	8,272
Wewoka	...	....	.....	5,002
Total	...	....	.....	38,054
Grand total for Seminole area				321,794

The French Development Corp.'s No. 1 Bryan, in Section 25-20-13, Tulsa County, found a showing of gas in the Wilcox

sand at a total depth of 1,663 feet. The test is temporarily shut down after fishing for casing. Notwithstanding the hole was full of water when the formation was penetrated the gas showed through the water. Same company's No. 2 Bryan, in Section 30-20-14, approximately a quarter of a mile north and east of No. 1 Bryan, has been completed as a commercial producer in the Red Fork sand at 758 feet.

Southern Oklahoma

The north and northeast limits of the new pool, 7 miles southwest of Duncan, in Stephen County, apparently has been defined by developments in the area during the week.

P. L. Gilbert's No. 1 Medley, SW cor. NE NE, Section 2-2s-8w, two locations north of production in the field, is considered a failure at a total depth of 2,242 feet. It is shut down. Crane and Rankin's No. 1 Dare, SW cor. NW NW, Section 1-2s-8w, two locations east of the No. 1 Medley, missed the pay and is shut down at 1,755 feet, where it may be abandoned.

Wells that were showing for producers include G. Pace's No. 5 Gilworth, NW cor. NW SE NW, Section 2-2s-8w, which was drilling out cement plugs to test sand at 1,550-55 feet. J. D. Loufborrow and others' No. 1 Dare, SW cor. NW SW SW, Section 1-2s-8w, southeast of production in the field, were preparing to make a production test of sand at 1,465-68 feet. It may be drilled deeper and given a shot.

Seminole Production

The production from the Greater Seminole area for the week ending April 30, was approximately 124,365 bbls. a day. The Seminole Field, which includes the first 12 pools listed below, averaged 86,600 bbls. daily:

Pool—	Bbls.
Little River	16,305
East Little River	3,865
Carr City	10,275
Maud	2,040
Mission	6,415
Bowlegs	9,535
Earlsboro	11,920
South Earlsboro	1,465
East Earlsboro	10,915
Seminole	8,560
East Seminole	1,335
Searight	2,670
Total	86,600
Allen	8,630
Asher	545
Wanette	4,010
Konawa	4,785
Sasakwa	1,770
St. Louis-Pearson	18,025
Total	124,365

Beckham County

Consolidated Gas Utilities Co.'s No. 1 Martin, NW cor. SW, Section 27-9-23w, has been shut in for 18,500,000 feet of gas in granite wash at 2,990-3,030 feet.

Creek County

Smith & Williams' No. 1-A Abraham, SW cor. NE, Section 27-16-9, is a rig. H. L. Wirick and others made location for No. 1 Brown, SE cor. NE, Section 34-14-10. M. S. Hughes and others' No. 2 Flinchum, SE cor. SW SW, Section 11-19-9, has been completed for 115,000 feet of gas in Layton sand 1,156-75 feet after plugging back from Burgess sand 2,393-2,417 feet.

Cotton County

W. E. Wilson & Kennett moved rig material in for No. 1 Wilson, NW cor., Section 6-2s-9w.

Muskogee County

J. V. Dunbar's No. 3 E. Spaulding, CWL SE SW, Section 4-15-18, is rigging up. C. F. Finefield and others' No. 3 P. Rentie, SE cor. NE NW, Section 9-15-18, is drilling at 200 feet. J. M. Foltz and others' No. 2 G. Island, NW cor. SE SE NW, Section 8-15-18, has been completed for 1,000,000 feet of gas and 20 bbls. of oil in sand 1,597-1,625 feet, total depth 1,640 feet. Braman Oil Co.'s No. 5 J. Jackson, SE cor. SW SE NW, Section 17-13-16, an old well deepened, has been completed for 25 bbls. in sand 2,057-95 feet.

Okfuskee County

Shell Petroleum Corp., Shelden and Staples' No. 2 Hopping, SW cor. NE NE SE, Section 21-12-11, has been deepened to 2,214 feet, plugged back to 2,211 feet and completed for 40 bbls. Shock & Phillips' No. 1 Lizzie Fish, SW cor. SE, Section 25-10-11, is rigging up to drill deeper from 3,099 feet.

Okmulgee County

J. Dulaney and others' No. 1-A J. Larney, CSL N half NW, Section 28-15-14, is a rig. Vierson & Walters' No. 1 J. Thomas, SW cor. SE NW SE, Section 2-13-12, is cleaning out to deepen from 2,755 feet. F. E. Cusack's No. 4 G. Scott, NW cor. SW NE, Section 15-13-14, an old well, is cleaning out to deepen from 2,440 feet. Aggas Drilling Co.'s No. 1-A Techorna, CWL SE NE, Section 13-16-13, has been completed for 30 bbls. in sand 1,485-1,512 feet, total depth 1,514 feet. M. J. Sullivan and Dave Logan's No. 1-A Nubbie, NE cor., Section 34-15-12, has been completed for 1,000,000 feet of gas in sand 1,824-45 feet after plugging back from 2,160 feet. A. E. Kirkland and others' No. 11 A. Ball, SE cor. NW NW, Section 17-15-13, made 1,000,000 feet of gas in sand 1,980-2,076 feet. J. L. Selby's No. 20 A. Flint, CWL NW NE, Section 26-14-14, is dry and abandoned at 985 feet.

Oklahoma County

Phillips Petroleum Co. and others' No. 1 Calkins, SW cor. NW NE, Section 3-11-3w, Oklhoma City Pool, Block 9, Lots 35 and 36 Walnut Grove, is a cellar. Mid-Texas Petroleum Co. is erecting the rig for No. 1 Vaughn, SW cor. NE, Section 15-11-3w, Block 15, Lawrence Place Addition. T. B. Slick estate made location for No. 2 Dodd, SW cor. SE SE, Section 22-11-3w. Argood Oil Co. has the rig on the ground for No. 1, Block 7, Lot 12, Spencer's South Oklahoma City Addition, Section 22-11-3w. Indian Territory Illuminating Oil Co. made location for No. 8 M.K.&T., NE cor. NW SW SW, Section 35-12-3w. No. 1 R. Lord, NE cor. SE NE, Section 35-11-3w, is a location. Location has also been made for No. 9 Oklahoma State, SW cor. NW NW, Section 36-11-3w. No. 10 Oklahoma State is a location in the NW cor. SW NW, Section 36-11-3w. Phillips Petroleum Co. and others' No. 1 Still, NW cor. SE NW NE, Section 3-11-3w, has been completed for 7,707 bbls. on 4-inch choke, producing from Wilcox sand topped at 6,280 feet, total depth 6,466 feet. No. 1 Houston, SW cor. NW SE NE, Section 3-11-3w, made 6,027 bbls. from Wilcox sand at 6,295 feet, total depth 6,424 feet, producing on a 4½-inch choke. Champlin Oil & Refining Co. and Hall & Briscoe's No. 5 Central, NW cor. SW NW SE, Section 3-11-3w, topped Wilcox sand at 6,264 feet, total depth 6,383 feet and made 9,181 bbls.

Pottawatomie County

A. C. Huckleberry's No. 1 Sparkman, NW cor., Section 35-8-4, is rigging up rotary tools.

Seminole County

Empire Oil & Refining Co.'s No. 2 Davis, SW cor. NE NE, Section 30-7-8, Fish Pool, flowed 4,915 bbls. from sandy Wapanucka 2,996-3,030 feet. Fred L. Coogan and others' No. 1 Moran, NE cor. SW, Section 30-7-8, is dry and abandoned at 3,186 feet.

Pontotoc County

Edna Marie Oil Co. and others' No. 1 Constant, SE cor. NE NE, Section 20-5-6, is a rig under construction. Dickson Petroleum Corp. made location for No. 2 Jackson, NW cor. SW SW, Section 22-5-6. Gus Delaney moved a machine in for No. 1 King, NW cor. SE, Section 32-5-8. Dickson Petroleum Corp.'s No. 1 Jackson, SW cor., Section 22-5-6, has been completed for 80 bbls. in sand 1,707-21 feet after drilling to 1,755 feet and plugging back to 1,725 feet. Rabial Oil Co.'s No. 1 Miller, SE cor. NE, Section 10-2-8, has been abandoned at 1,814 feet.

Stephens County

P. L. Gilbert has the rig up for No. 2 Medley, SW cor. SE SE NE, Section 2-2s-8w. J. C. Chambers' No. 1 Dare, NW cor. SE SE, Section 2-2s-8w, has been completed for 3,500,000 feet of gas in sand 1,415-25 feet.

Osage County

Pueblo Petroleum Co.'s No. 3, SE cor. NW NW, Section 14-21-8,has been completed for 25 bbls. in Red Fork sand at 2,246-65 feet, total depth 2,267 feet. Devonian Oil Co.'s No. 3, SW cor. SE SW, Section 30-21-10, made 15 bbls. in sand 1,993-2,005 feet after being deepened from 1,992 feet.

Pawnee County

F. S. Menegar's No. 3 Nielson, CNL S half SW, Section 27-21-8, is dry and abandoned at 2,215 feet.

WILDCAT OPERATIONS IN OKLAHOMA

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	S.D. 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	S.D. 5,502 ft.

BECKHAM COUNTY

Pattel Royalty's No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w	Rig.
Price-McFann's No. 1 Webster, C SW SW Sec. 34-8-26w	T.D. 2,344 ft.; plugged back to 1,890-1,900 ft.; 1,500,000 ft. gas.
Mid-Continent's No. 1 Schaff, C NE SW Sec. 22-11-22w	Waiting on cmt. to set 430 ft.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-22-22w	S.D. 2,550 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w	S.D. 3,575 ft.

BLAINE COUNTY

Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 13-19-10w	S.D. 5,115 ft.

CADDO COUNTY

Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w	S.D. 1,115 ft.

CHEROKEE COUNTY

La Piere et al's No. 1 Woods, C SE SE Sec. 27-17-21	S.D. 1,504 ft.

COAL COUNTY

Radial Oil Co.'s No. 1 McGraw, NE NW Sec. 2-1s-8	S.D. 1,450 ft.
Whitney et al's No. 1 Miller, SE NE Sec. 10-2-8	Show wtr. at 1,155-60 ft.; 1,845 ft.; S.D.

COMANCHE COUNTY

G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	S.D. 1,450 ft.

CREEK COUNTY

R. F. Moore et al's No. 1 Gilliam, NE cor. SW NW, Sec. 17-17-8	S.O. 2,815-39 ft.; shot 160 qts.; swab 72 bbls. 24 hrs.; pumped 30 bbls. 3 hrs.

CUSTER COUNTY

Miley Pet. Co.'s No. 1 Caldwell, NE Sec. 12-14-14w	Location.

GRADY COUNTY

Carter Oil Co.'s No. 1 Carson, C SE SE SE, Sec. 12-3-8w	Rig.
Schoonmaker et al's No. 1 Station, NW cor. 35-4-6w	Spudding.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w	S.D. 5,850 ft.

GARVIN COUNTY

Malarnee et al's No. 1 Phillips, NE SW SE Sec. 34-2-2w	S.D. 4,830 ft.

GREER COUNTY

Dovell et al's No. 1 Capell, NW cor. Sec. 1-7-22w	5,000,000 ft. gas 1,455-65 ft.; T.D. 1,760 ft.
Frei.ch's No. 1 Murphy, SW NW Sec. 23-7-21w	S.D. 1,645 ft.

HASKELL COUNTY

Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19	S.D. 2,000 ft.
Ault et al's No. 1 Hall, SE NW Sec. 25-19-9	S.D. 200 ft.

KAY COUNTY

Bluebaugh et al's No. 1 Indian, C NW NE Sec. 30-25-1	S.D. 2,026 ft.
Harris & Haun's No. 1 Watson, SW NW Sec. 28-28-1w	3,630-37 ft.; pump 50 bbls. 24 hrs.
Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1	Location.
Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-2	S.D. 3,693 ft.
Blackwell Oil Co.'s No. 1 Harshman, Sec. 2-26-1w	Rig on ground.

KIOWA COUNTY

Christian's No. 1 Jones, NE SE Sec. 8-7-18w	Drlg. 920 ft.

LATIMER COUNTY

P. English's No. 1 Unknown, NW SE Sec. 16-6-19	S.D. 1,542 ft.

LINCOLN COUNTY

Sovereign Oil's No. 1 Selakek, NE SE Sec. 2-12-5	Drlg. 4,165 ft.
Hilton Phillips' No. 1 Phillips, SW NW Sec. 2-14-3	Drlg. 5,034 ft.; show oil and wtr.
Mote et al's No. 1 School Land, NW cor. Sec. 36-17-5	Drlg. 3,030 ft.

NOBLE COUNTY

Wentz Oil's No. 1 Wolff, C SE NW Sec. 17-20-2w	Location.

OKLAHOMA COUNTY

Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-3w	S.D. 1,200 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w	S.D. 5,515 ft.

PAWNEE COUNTY

Rookstool's No. 1 Wylie, NW NE SW Sec. 6-20-5	S.D. 1,950 ft.

PITTSBURG COUNTY

Ruby Ann Oil Co.'s No. 1 George, CEL NW SE Sec. 3-4-16	Drlg. 935 ft.
Tape Oil Co.'s No. 1 Fulton, SE Sec. 34-7-14	S.D. 1,700 ft.
J. Morrison's No. 1 Fowler, NE SE Sec. 13-7-17	Rig.
C. Kennedy's No. 1 Travis, C SW NE Sec. 15-7-14	Rig.
C. Canady's No. 1 Jones, NW cor. Sec. 14-8-14	Rig.

POTTAWATOMIE COUNTY

Clara Oil & Gas Co.'s No. 1 Unknown, SW NW NE, Sec. 1-9-4	Drlg. 3,408 ft.
Barnsdall et al's No. 1 Gray, NE SW Sec. 25-6-4	Drlg. 3,339-3,467 ft., 492 bbls.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w	S.D. 5,150 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w	S.D. 3,420 ft.

WASHITA COUNTY

Miley Pet. Co.'s No. 1 Wolfe, NE SW Sec. 23-9-17w	Rig.
Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w	Drlg. 2,740 ft.; show oil 2,459-67 ft.; S.D. 2,757 ft.
Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18	T.D. 1,300 ft.

OKLAHOMA PANHANDLE

TEXAS COUNTY

Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-1S	T.D. 4,720 ft.; to cement.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 18-3s-10	S.D. 1,720 ft.

CARTER COUNTY

Lundy's No. 1 Spraggins, C NE NW SW Sec. 8-1s-2w	Drlg. 3,120 ft.

JEFFERSON COUNTY

Smith's No. 1 McCarty, SE NW NE Sec. 18-4s-8w	Location.

MARSHALL COUNTY

Trailkill et al's No. 1 Spence, NE NW Sec. 10-7s-6	Rig.
Liggett et al's No. 1 McDuffee, SE NE Sec. 3-7s-6	Drlg. 600 ft.
Starrett et al's No. 1 Henry, NE NW Sec. 22-7s-6	S.D. 750 ft.
Everett et al's No. 1 Agres, SE NE Sec. 14-7s-6	S.D. 1,170 ft.
Newman et al's No. 1 Henry, NW cor. Sec. 22-7s-6	Rig abnd.

McCURTAIN COUNTY

Prassell et al's No. 1 Wagoner, SE NE Sec. 5-8s-27	S.D. 560 ft.
Stampfs et al's No. 1 Harris, SW NW SW Sec. 14-9s-25	S.D. 2,731 ft.
Stewart's No. 1 Patterson, C SE SE Sec. 7-6s-24	S.D. 1,411 ft.

PUSHMATAHA COUNTY

Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3s-18	S.D. 1,500 ft.

STEPHENS COUNTY

George's No. 1 Ryan, NW SW NE Sec. 31-3-15	S.D. 510 ft.

U. S. CHAMBER AND OIL

The twentieth annual meeting of the Chamber of Commerce of the United States will be held at San Francisco, Calif., May 17-20. A round table for the oil and lumber industries will be held at 2 p. m. Thursday, May 19, to discuss:

1. What does the oil industry need?
2. What does the lumber industry need?
3. What can the federal government do?
4. What can the states do?

Kansas Tightens Oil-Gas Conservation

Public Service Commission Appoints Committee and Issues New Order. Crude Oil Production in State Declines

By W. A. Spinney
Staff Correspondent, Kansas Fields

At the last meeting of the Kansas Public Service Commission held April 29, steps were taken toward the conservation of the State's natural gas reserves. An advisory committee was created to work out rules and regulations. The commission also issued an order requiring all operators in the State to obtain a permit from the Kansas Public Service Commission before drilling an oil or gas well in the State, except in pools, in which production averages 15 bbls. a day or less.

The order which was made effective May 1, provides that no producing sand shall be penetrated, except under direct supervision of a commission conservation agent. Members of the commission stated that the Public Service Commission had no power to deny a permit, but that the order would give the regulatory board a record of drilling activities in the State and that its object was to enable the commission to have its conservation agent at the wells to see that a producing sand was properly sealed off when it was drilled through.

The following gas conservation committee was appointed, Dr. Raymond Moore, state geologist, chairman; A. L. Oswald, mayor of Hutchinson; C. A. Leland, Jr., Topeka, president of Kansas Power & Light Co.; B. R. Maltby, mayor of McPherson; U. G. Charles, mayor of Hugoton; A. S. Ritchie, Wichita, production manager, Derby Oil Co.; C. S. Warren, Eldorado, production superintendent, Empire Oil & Refining Co.; Joe Smith, Hugoton, production manager, Argus Pipe Line Co.; A. M. McQuiston, Wichita, production superintendent, Phillips Petroleum Co.; Donald Stewart, vice president, Union Gas Corp., Independence; L. R. Slater, McPherson, production manager for Derby Oil Co.; and George P. Dickey, Wichita, oil and gas operator.

The conservation rules and regulations as prepared by the committee will be submitted to the Public Service Commission, May 27.

H. I. Craig, of Independence, has been selected by the commission, as its conservation agent in charge of work under the new order.

Interesting Wildcat

Skelton Oil Co. and others' No. 1 Ott, C SE SE, Section 16-19-14w, a wildcat west of Great Bend in Barton County, is holding the interest of oil operators as preparations were under way during the week to run a liner and test a showing of oil found at 3,530-46 feet while drilling in Silicious lime. The drill also uncovered about 3,000,000 feet of gas in the lime. Prospects of opening a new producing area were considered bright when the well is completed. The hole is to be cleaned out and drilled deeper as soon as the liner is run.

In the Blake area, Reno County, the producing area has been extended by Olson Drilling Co. and Shell Petroleum Corp.'s No. 1 Regier, C SE SE, Section 24-23-4w, which is estimated at 300 bbls. of oil and 4,000,000 feet of gas per day. The oil and gas were found in chat at 3,265-3,375 feet. It is located in the vicinity of the same operators' No. 1 Blake, the discovery well in the northwestern part of the county, which made 200 bbls. of oil and 16,000,000 feet of gas a day. It is also in the vicinity of the same operators' No. 1 Goering, in Section 26-23-4w, an 88,000,000-foot gasser, the largest gas well every completed in the State.

The Eldorado Refining Co. of Eldorado expects to construct a line from Aylward and others lease in Section 1-17-10w, in the Stratman Pool, Ellsworth County, to a loading rack in Holyrood in the same county. The projected line is expected to be under construction in a few weeks.

An east extension to the Ritz-Canton area in McPherson County was indicated by E. B. Shawver and others' No. 1 Lively, SW cor. NW, Section 21-19-1w, which topped the Viola lime at 3,360 feet, 20 feet higher than the west offset, the Darby Petroleum Corp.'s No. 2 Kaegi. Shawver expects to drill the test deeper into the Viola lime as soon as the pipe is cemented.

Good Well in Winfield

One of the largest wells yet completed in the Winfield Townsite Pool, in Cowley County, was Sinclair-Prairie Oil Co.'s No. 2 Dibbens, Lot 5, Block 12, Winfield Townsite, in Section 22-32-4. It swabbed 885 bbls. of oil in 24 hours from Silicious lime at 3,251-62 feet. The well is located on the east side of the townsite.

Derby Oil Co. and others' No. 2 Lacquemont, C NW SE, Section 20-19-1w, in the Ritz-Canton Pool, in McPherson County, was given a potential rating of 1,582 bbls. a day from the Viola lime at 3,401-09 feet. United Petroleum Co. and others' No. 1 in the SE cor. SE NW, Section 20-19-1w, found the Viola lime at 3,416-22 feet and after plugging back to 3,421 feet, it made 60 bbls. of oil an hour on the pump.

Tidal Oil Co. and others' No. 1 Fletcher, SW cor. NW SE, Section 16-19-1w, in the northern part of the Ritz-Canton Pool, was drilling at 3,445 feet on the last reports in black shale. The Viola lime was expected some feet higher in the hole and it would indicate that the test has a poor chance of making a commercial well. The test found a showing of oil and gas in the chat. It is a half mile north of production.

Simmons and others' No. 1 Krehbiel, SE cor. NW, Section 33-18-1w, a wildcat test about 4 miles north of the Ritz-Canton Field, was spudding. Work at the location was rushed in order to spud by May 1.

Carter Oil Co.'s No. 1 Tinsley, NW cor. SE, Section 6-20-1w, is a new location in the south end of the field. It is two locations from production and is a half mile west of a failure in the Viola lime recently completed. The same company's No. 1 Lagree, SE cor., Section 17-19-1w, in the northeast part of the field, which was completed as a gas well in the chat formation, is rigging up to drill to the Viola lime.

The location for Mid-West Refining Co.'s No. 1 Brock, in Section 6-23-11w, Stafford County, has been changed to the center of the NW NW NW in the same section. It is to be moved from the center of the 40 acres to the center of 10 acres. It is the diagonal offset to the same operator's discovery well, No. 1 Richardson.

Williams & Moore's No. 1, C SW SE, Section 23-16-10w, Ellsworth County, found a hole full of oil in the Silicious lime at 3,388-91 feet. A cave at the bottom of the well was cemented off and after drilling out the plug it swabbed 90 bbls. of oil and a showing of water was found. It may be plugged back a few feet.

Important Wildcat

Whan and others' No. 1 Dixon, NW cor. SW Section 7-19-2w, a wildcat test northwest of the Decker gas field, in McPherson County, found a showing of oil in the Kansas City lime at 2,348 feet. The top of the formation is believed to be logging about 18 feet higher than that in the nearest producer. This is also believed to be the first showing of any extent in that part of the county, although in the old Anderson Pool, in Township 18-2w, several producers were completed in this formation. Casing will be landed on top of the Kansas City lime and the oil and gas tested. The test is located between the Decker gas field and the Old Anderson Pool. If it does not make a commercial producer it will be drilled deeper to the chat.

H. A. Patton and others' No. 2 Swanson, C NW NE Section 6-26-2, Sedgwick County, was spudding during the week. It is a semiwildcat located on acreage southeast of a well drilled several years ago which made 800 bbls. a day flowing when first completed. It soon went to water and was abandoned.

George P. Dickey Oil Co.'s No. 3 Decker, SW cor. NW SE Section 35-19-2w, was given a potential of 4,106 bbls. after it had flowed 2,053 bbls. in 12 hours from the chat at 2,928-70 feet. It is the largest well in the pool at this time. Wells on this lease have been the largest yet found in the pool. No offsets will be enforced by the completion.

Slick, Pryor & Lockhart's No. 1 Stucky, SE cor. SW SW Section 27-20-3w, the north extension well to the Voshell Pool, in McPherson County, on a pumping test made 568 bbls. of oil the first 24 hours from the Simpson sand at 3,433-42 feet, after being drilled deeper from the chat. The well has the largest potential rating of any well in the Voshell Pool.

Shawver and others' No. 1 Koehn, NE cor., Section 2-20-2w, McPherson County, found water in the chat at 2,944-83 feet. It will be drilled deeper to the Viola lime. The test is the south offset to the Dickey and others' No. 1 Decker, in SE cor., Section 35-19-2w, which made 6,722 bbls. of oil the first 24 hours.

Butler County

Ramsey and others' No. 1 Ramsey, SE cor. NE, Section 1-24-5, is dry and abandoned at 2,563 feet.

Cowley County

Lewis Production Co. and others' No. 2 Orr, SE cor. NE NE, Section 30-31-6, is a rig. Brewer and others' No. 1 Tredway, NW cor. SE SE, Section 22-32-4, is spudding. Deal and others' No. 1 Randall, NW cor. SW SE, Section 22-32-4, is spudding. Roth & Faurot's No. 5 Moncrief, SW cor. NE, Section 22-32-4, is a rig. Sinclair Prairie Oil Co.'s No. 2 Dibbens, Lot 5, Block 12, Winfield townsite, Section 22-32-4, swabbed 885 bbls. from Silicious lime 3,251-62 feet.

Ellsworth County

Vickers Petroleum Co. and others' No. 1 Stoltenberg, NW cor. NE NW, Section 27-16-10w, has been completed for 800 bbls. in Silicious lime 3,308-35 feet.

Greenwood County

Palmer and others' No. 1 Curry, NE cor. NW SW, Section 4-22-11, is drilling at 460 feet. Hover and others moved a machine in for No. 1 Tugarden, SW cor. NE, Section 16-23-11. McGinnis and others' No. 1 Peoples, NE cor. NW NE, Section 33-23-11, has been completed for 160 bbls. in sand 1,966-89 feet, total depth 1,993 feet. Mathews & Rex's No. 1 Lewis, NW cor. SE, Section 8-24-12, made 60 bbls. in sand 1,675-85 feet, total depth 1,692 feet.

McPherson County

Simmons & Canary made location for No. 1 Krehbeil, SE cor. NW, Section 33-18-1w. Youker and others staked location for No. 3 Gratton, SW cor., Section 24-19-2w. Mid-Kansas Oil & Gas Co.'s No. 1 Etter, NW cor. NE SE, Section 3-20-3n, is moving in. Derby Oil Co. and others' No. 2 Locquemont, NW cor. SE. Section 20-19-1w, has been completed for 1,582 bbls. in Viola lime 3,401-12 feet. Lassen and Shell Petroleum Corp. and others' No. 1 Unruh, NW cor. SE, Section 31-19-1w, made 100 bbls. in Viola lime 3,420-35 feet. Vernon Oil & Gas Co.'s No. 1 Lewis, SE cor. SW, Section 26-19-2w, flowed 225 bbls. from chat 2,965-71 feet. Rose Spring Drilling Co.'s No. 1 Dielman, SE cor. NE SW, Section 35-19-2w, topped chat at 2,954 feet, drilled to a total depth of 3,005 feet and plugged back to 2,999 feet and was completed for 1,394 bbls. in pay 2,995-98 feet.

Sedgwick County

Shell Petroleum Corp.'s No. 4 Fisher, SW cor. NW SE, Section 15-26-2, is rigging up to deepen from 2,926 feet. Shell Petroleum Corp.'s No. 1 Erdwein, SW cor., Section 11-26-2, is pulling 6-inch casing to deepen from 2,860 feet. Rosenthal and others' No. 1 Pinsen, CNL SW SW, Section 15-25-1e, has been completed for 105 bbls. in Kansas City lime at 2,605-09 feet, total depth 2,613 feet.

Stafford County

Midwest Refining Co. and others' No. 6 Brock, NW cor., Section 6-23-11w, is a rig under construction.

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless marked otherwise)

BARTON COUNTY

Company, farm and location— Remarks:
Skelton Oil Co.'s No. 1 Ott, C SE SE, Sec. 16-19-14w....3,000,000 ft. gas 3,483-85 ft.; drlg. 3,525 ft.

DICKINSON COUNTY

Severe et al's No. 1 Lavengood, NE SW, Sec. 13-13-2...S.D. 4,752 ft.

DOUGLASS COUNTY

Hewitt's No. 1 Dodder, CWL SW SW, Sec. 7-15-18.....Drlg. 1,112 ft.

EDWARDS COUNTY

Mid-Kansas O. & G. Co.'s No. 1 Converse, SW NE NE, Sec. 30-24-18w .....Drlg. 1,570 ft.

ELLSWORTH COUNTY

Johnson Vickers' No. 1 Claussen, C SE NW Sec. 31-15-10w .....Rig.
R. Gear et al's No. 1 Sanberth, C SW SE, Sec. 29-16-9w..S.D. 50 ft.

GRAHAM COUNTY

Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-25w.....Location.

FINNEY COUNTY

National Ref. Co.'s No. 1 Wells, C SW, Sec. 13-23-30w...U.R. 4,550 ft.

HARVEY COUNTY

D. R. Louck's No. 1 Regier, SW SE NW, Sec. 9-22-3w...Drlg. 1,710 ft.
J. Liggett et al's No. 1 Vessel, NE SW, Sec. 3-23-3w....Location.
Liggett et al's No. 1 Davis, SW SE NE, Sec. 7-24-1.....S.D. 2,500 ft.

KINGMAN COUNTY

Panhandle Drlg. Co.'s No. 1 Wetheral, C SE NW SW, Sec. 20-28-10w .....12-in. csg. 1,610 ft.; S.D.

McPHERSON COUNTY

Detrich et al's No. 1 Sinclair, SE SW, Sec. 25-19-1w.....Drlg. 2,000 ft.

MORTON COUNTY

Hydraulic Oil Co.'s No. 1 State Land, NW SE, Sec. 22, 34-43w .....T.D. 3,640 ft.; temp. abd.

MORRIS COUNTY

Urschel et al's No. 1 Bersuch, NW SE NW, Sec. 10-17-7..S.D. 915 ft.
Kostle-Moseley & Hatfield's No. 1 Furney, NE SE, Sec. 16-16-8 .....Spud; S.D.
Hankerson et al's No. 1 Cessman, SW SE, Sec. 25-16-9...Abnd. 2,625 ft.

(Continued on Page 70)

Another Good Well in Western Zwolle

New Operations on Two Good Sized Blocks in North Louisiana. Nine New Locations in Zwolle District. Activity in Arkansas

By J. R. Crumpton
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., May 2. — The several wildcats in North Louisiana and the border counties of East Texas which were cored or tested during the past week, either experienced casing difficulties on bailing, or cut cores that indicated barren results from the present depths. The wildcatting activities continue on the upward trend, however, with two new operations to begin on good sized blocks in North Louisiana during the coming week. Nine new locations were staked in the Zwolle Field on the western and eastern extremities, assuring this area of a continued active play.

The most likely looking wildcat to be tested during the week was J. J. Keen, trustee's No. 1 Belton, Section 31-9-13, about 8 miles northwest of the western Zwolle production in Sabine Parish. The well developed a good show of oil and gas when bailed, but the casing collapsed at 2,812 feet while bailing at 2,700 feet. Six-inch casing had been set at 3,057 feet with the total depth at 3,028 feet. This test has checked high all along the log and had some good shows of oil in marl and top of the chalk around 1,600 feet and in the chalk at 2,039 feet. The operators have not decided whether to try to save the present hole or skid over and start a new test. The partial results obtained warrants a thorough test in this vicinity. In Caldwell Parish, Carter-Bell's No. 1 Taylor, Section 17-14-4, tested salt water at 2,488 feet, and is coring black shale at 2,495 feet. Six-inch casing was set at 2,460 feet for a test of 5 feet of rock and 5 feet of sand showing gas from 2,468-78 feet.

De Soto and Webster

In the northern part of DeSoto Parish, Warren & Craig are nearing the pay depth in their No. 1 Phillips, Section 33-13-14. The test cored black shale from 2,953-57 feet and dry white sand from 2,957-62 feet. The crew will continue to core for the oil-bearing sand which was encountered from 2,985-90 feet in Pelham & Bundy's No. 1 Rhodes, Section 32-13-14, 1 mile west. The latter well was completed at 3,000 feet, flowing 12 bbls. of oil and 15 bbls. of salt water. Another wildcat in DeSoto Parish, Walter Nicholson's No. 1 Guy, Section 3-11-13, tested dry in chalk at 1,675 feet, and arrangements are being made to deepen. In the northern part of Webster Parish, about 4 miles west of production in the Haynesville Field, J. K. Wadley's No. 1 Matthews, Section 11-23-9, cored limey shale from 2,797-2,800 feet. A former test, the Red Hawk Oil Co.'s No. 1 Matthews, 200 feet north of No. 1 Wadley, was junked and abandoned at 2,797 feet after casing collapsed while bailing. The Red Hawk well cored several feet of shale carrying an oil-bearing sand, and a fair show of oil developed on drill stem test before casing was set. The show is coming from the Blossom sand which produces in the Haynesville Field from 2,700-50 feet.

East Texas Border

In Harrison County, East Texas, Medders-Gochee and others' No. 1 T. W. Davidson, R. W. Starr Survey, is shut down in Georgetown lime at 3,738 feet. The operators report encountering a likely looking sand from 3,692-3,707 feet and arrangements are being made to set casing for a test. The wildcat is located in the northwestern part of Harrison County, 5½ miles northwest of the town of Hazelton. In the same county, J. G. Peterbaugh and others set 10-inch casing at 104 feet and are drilling at 1,840 feet on their No. 1 Collums in the W. G. Pentecost Survey. Benedum & Trees' No. 1 Bertha Tyler, William Holloway Survey, in Marion County, tested 14 fourbles of salt water in 25 minutes from 2,973-3,039 feet, and two later tests in the Woodbine had barren results. The test is now in Georgetown lime, but it is understood that the hole will be carried to 3,750 feet, the contract depth. The Baunoch Development Co.'s No. 1 Miller, H. Fulgram Survey, in Marion County, is drilling at 3,900 feet. Other East Texas wildcats follow: Panola County, G. A. Davidson's No. 1 Latham, William Rich Survey, coring lime at 2,680 feet; Moses & Wallace's No. 1 Daniel, Isabelle Hanks Survey, set 10-inch casing at 85 feet. Shelby County, E. P. Knotts and others' (formerly Chapparel Oil Co.) No. 2 Holt, Matthew Moore Survey, cored 7 feet of sand from 3,725-32 feet; Fuller and O'Brien Brothers' No. 1 Frost-Johnson Lumber Co., Aaron Castleberry Survey, drilling at 2,324 feet; Sedberry and others' No. 1 Pickering Lumber Co., Jane Stoddard Survey, set 10-inch casing at 60 feet, drilling at 400 feet.

Four Completions

Only four completions were reported from three states in this division, one oil well, one gas well and two dry holes resulting. In the Zwolle Field, Sabine Parish, E. F. Neely's No. 2 Clanan, Section 14-7-11, is flowing 30 bbls. daily by heads from 2,513 feet. Although not officially completed, the western part of this field furnished another good gusher to match the Coates Petroleum Co.'s No. 1-B Martinez of last week. Beene and others' No. 1 Ezernack, Section 2-7-13, came in with 5 fourbles of drill stem in the hole with an estimated flow of 2,500 bbls. daily from 2,400 feet. The well flowed six hours and bridged over, was revived and flowed two days before bridging over again. The crew is fishing for the lost drill stem, and the indications are that the well, when cleaned out, will be one of the largest producers of the field. It is located in the western extension, between the Coates Petroleum Co.'s No. 1-B S. S. Martinez, which extended the field 1½ miles west, and the production in Section 1. Outside of the production line of the eastern extension, J. E. Smitherman's No. 1 Smith, Section 7-7-10, was dry and abandoned at 3,014 feet. The Bethany Field of Panola County, East Texas, furnished the only gasser of the week, the United Production Corp.'s No. 12 Wermer, B. C. Jordan Survey, gauging 17,000,000 feet from 2,912 feet. In Union County, Arkansas, Mrs. R. K. Jones' (formerly Sunby and others) No. 2 Pardue, Section 33-16-14, was junked and abandoned at 2,460 feet, after whipstocking stuck drill stem at 1,690 feet with the old total depth at 3,247 feet.

The announcement by Frank Foster, Inc., that its No. 1 Stevens, Section 20-9-11, will be deepened in an effort to find an oil-bearing sand underlying the gas from which it is now producing, has caused more than ordinary interest. The well was completed about a month ago from 3,358 feet, and gauged 13,379,000 feet of gas from the top of the Fredericksburg of the lower cretaceous. The discovery well of this area, the Langbridge Oil Co.'s No. 1 Stevens, 1 mile northeast of the Foster gasser, is producing about 35 bbls. of high gravity oil daily from 3,369 feet. Four miles northeast of this area, J. M. Bridges is drilling at 900 feet on his No. 1 Armstrong, Section 28-10-11.

The Standard Oil Co. of Louisiana and Sam D. Hunter have made a location to drill a joint wildcat in Section 19-12-14, on the Sutherlin tract. The test is on a 6,000-acre block assembled by the former company, and is about 4 miles southwest of Warren & Craig's No. 1 Phillips, now testing. In Grant Parish, O. Robichaux has staked location for his No. 1 T. M. Bradford, Section 16-9n-1e. This is the second test for this immediate vicinity, the Security Petroleum Corp. is drilling at 1,229 feet on its No. 1 Swope estate to the south in the same section.

Arkansas Wildcats

Four counties in Arkansas are represented with active wildcats as follows: Ashley County, D. S. Brooks, Inc.'s No. 1 Crossett Lumber Co., Section 31-15s-6w, set 10-inch casing at 125 feet, drilling at 2,195 feet; Hot Springs County, the Star Oil Co. is ratholing at 1,306 feet on its No. 1 Cunningham, Section 11-5-16; Miller County, Fitzwater and others' No. 1 Beck, Section 33-15-26, drilling lime at 2,665 feet; C. H. Litchfield's No. 1 Hervey, Section 2-15-26, is temporarily abandoned at 2,885 feet. In the southern part of the same county, W. E. Noel and others' No. 1 Dickson heirs, Section 11-20-27, is drilling at 2,200 feet. The Lion Oil Refining Co.'s No. 9-A Hayes, Section 4-16-15, a deep test in the Smackover Field, Union County, stands temporarily abandoned at 7,255 feet. Wilson & Chapman are drilling two wells in the northeastern extension of the Urbana Field, their No. 2 Emily King, Section 3-18-13, is drilling at 1,550 feet, and No. 1-A D. Norman, in the same section, is drilling at 1,110 feet.

Mississippi Operations

In Clarke County, Mississippi, F. X. Gowans is moving in rig on his No. 1 Elfring, Section 13-1n-14e. The Mississippi-Minnesota Oil Co.'s No. 1 Edwards Land Co., Section 23-6n-4w, in the western part of Hinds County, is drilling at 2,600 feet. In the southern part of the State, Lamar County, Stauffer & Kouri's No. 1 Bond, Section 18-2n-14w, is setting 10-inch casing at 1,050 feet with the total depth at 1,090 feet. The United Gas Public Service Co.'s No. 1 Lenhart, Section 14-14n-6w, Sharkey County, is drilling and coring dark sandy shale in the Midway at 3,620 feet. It is reported that the Bay Springs Petroleum Co. is arranging to resume drilling on its No. 1 Keys, Section 21-2-10, in Jasper County. This test has been temporarily abandoned for the past month at 3,408 feet, the contract depth on the hole by the operators for the Danciger Oil & Refining Co.

Daily Average Runs

There was a net increase of 645 bbls. in the daily average runs from the fields of North Louisiana and Arkansas during the past week. The Zwolle Field had the best gain, increasing 700 bbls. daily over the previous week. The daily average runs from the several pools were:

NORTH LOUISIANA

	Bbls.
Caddo, light	5,400
Caddo, heavy	2,055
Cotton Valley	530
DeSoto and Red River	1,990
Elm Grove	250
Haynesville	4,435
Holly	285
Homer	2,890
Pleasant Hill	320
Sarepta-Carterville	840
Urania	3,610
Zwolle	7,435
Total North Louisiana	30,040
Total previous week	29,415
Increase	625

ARKANSAS

Champagnolle	1,870
El Dorado	3,120
Lisbon	540
Nevada	1,200
Smackover, light	2,920
Smackover, heavy	23,700
Stephens	640
Urbana	950
Total Arkansas	34,940
Total previous week	34,920
Increase	20
Total both states	64,980
Total previous week	64,335
Increase	645

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

AVOYELLES PARISH

Company, well, farm name, section and block— Remarks:
Stauffer & Eshleman's No. 1 Caruth, Sec. 40-1n-7e.....Derrick.

BOSSIER PARISH

Dr. W. N. Hankins' No. 1 Newell, 300 ft. S and W, NE cor., Sec. 12-19-11 .....Reaming to bottom 1,890 ft.

CADDO PARISH

Pyramid O. & G. Co.'s No. 2 Beard, Sec. 9-8-16, 660 ft. S, 1,980 ft. W, NE cor. Sec. .....Drlg. 2,707 ft.

CALDWELL PARISH

Carter Bell's No. 1 Taylor, 150 ft. S, 150 ft. E, NW cor. NE SE, Sec. 17-14-4 .....Coring 2,495 ft.
Hudson et al's No. 1 Burton, Sec. 35-12-2e .....S.D. 2,950 ft.

CATAHOULA PARISH

National Drlg. Co.'s No. 1 Marsh McMiller, 70 ft. N, 100 ft. W, C, Sec. 26-9-6.....T.A. 3,097 ft.

DE SOTO PARISH

Donley & Chastain's No. 1 H. Smith, 325 ft. W, 600 ft. N, SE cor., Sec. 31-14-15 .....Washing to bottom 2,295 ft.
E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW, Sec. 30-13-15.....Coring 3,430 ft.
A. R. Smith's No. 1 Horn, Sec. 16-12-16, NE cor. Sec. ..Rigged up and S.D.
DeSoto Dev. Co.'s No. 1 Nickey, Sec. 7-13-12.....Derrick.
Walters-Nicholson, tr.'s No. 1 Jim Guy, Sec. 3-11-13....Tested dry 1,675 ft; S.D; W.O.
Warren & Craig's No. 1 Phillips, 450 ft. N, 250 ft. E, SW cor. NE, Sec. 33-13-14.....S.D. 2,400 ft; repairing rig.

GRANT PARISH

Security Pet. Corp.'s No. 1 Swope est., Sec. 16-9-1e, 1,698 ft. N, 220 ft. E, SW cor. Sec. .....Drlg. 1,229 ft.
O. Robichaux's No. 1 T. M. Bradford, 1,870 ft. E, 314 ft. S, NW cor., Sec. 16-9n-1e .....Location.

MOREHOUSE PARISH

United Gas Public Service Co.'s No. 2 Sandidge, Sec. 11-20n-4e, 656 ft. S, 1,332 ft. W, NE cor. NW..... S.D. 2,132 ft.

NATCHITOCHES PARISH

W. M. Coates' No. 1 Ross Olive, Sec. 10-9-10, 660 ft. S and E from cen. of Sec. .....Rigging up.
Dr. H. S. Gerson's No. 1 Smith, Sec. 11-10-8, 2,000 ft. N, NE cor. of irregular Sec. 10, in Sec. 11.....Waiting on 8-in. csg. 1,000 ft.

(Continued on Page 68)

Caldwell County Tests Hold Attention

Operations West and Northeast of Luling Field Interesting. Important Tests Scheduled for Upper Balcones Fault Zone Region

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., May 2.—Bob Rose's No. 1 Pierce, 2½ miles southwest of the Luling Field in Caldwell County, which came in with an initial flow of 226 bbls. through open casing the first hour early last week, was pinched down to 132 bbls. flowing through 1½-inch choke at the close of the week. The third hour the well dropped to 182 bbls. Gravity of the oil is 38.5. The next important event in the vicinity of this well will be the result in the Meyer Exploration Co.'s No. 1 Walker, a mile northeast of No. 1 Pierce. No. 1 Pierce blew in with drill stem in the hole at 2,114 feet, the last identified formation being Austin chalk and it is presumed to be producing from a crevice. No. 1 Walker, a mile north, at 2,460 feet, was in Georgetown topped at 2,400 feet and it at least did not seem to be running high. It should go into the Edwards lime over Sunday.

Edwards in the old Luling Field to the northwest was topped at around 2,150 feet and in the Joe Bruner Field at around 2,700 feet and No. 1 Pierce is half way between. The gravity of the oil in the old Luling Field is about 20 and that in the Bruner or Salt Flats Field about 36, compared to 38.5 in No. 1 Pierce. Remembering the Branyon Pool operators are waiting to see what the results of No. 1 Walker are before starting in too heavy on a drilling campaign. The discovery well of the Branyon Pool was circled with dry holes before they finally gave it up, and No. 1 Pierce probably producing from a crevice may repeat that history.

However, Empire Gas & Fuel Co. has the acreage on the south and it looks as though it would almost have to drill an offset test.

Webster Gets a Well

Northeast of the Luling Field, C. J. Webster Oil & Gas Co. is this week planetabling his block of leases and moving in derrick for the second test. His No. 1 McCrory has opened some kind of a field. It was only 1 foot into the Edwards lime and at first bailed oil but a little later began to make some sulphur water. Absence of sulphur water in an Edwards Pool would have been more surprising than its presence. Water has helped to produce the oil in all three of the Edwards lime pools.

Webster's test getting only 1 foot of formation above the water line has given the thought to many that it is probably an edge well and that a location to the northwest of it and towards the fault line would get more formation before going into the water and probably a much bigger well. The company is confident it has a pool of some kind and as soon as the geology can be rechecked and a location made the second test will be started. It will also probably plug off a little of the bottom of No. 1 McCrory in the hope of lessening the amount of water. It is placed as probably about a 100-bbl. well as it is.

The question of the water level was one of the first and biggest questions in the old Luling Field. The discovery of that field was an edge well on the south edge of the field and got only a little oil above the water but tests drilled farther up the dip toward the northwest got more formation before going into water. There is every chance for Webster Oil & Gas Co.'s second test doing the same thing and repeating the history of Luling.

Camp Gets Well

John F. Camp's No. 2 Sue Denman, 300 feet south and west of his discovery well in the Darst Creek extension at 2,479 feet was a small well but was deepened a little to 2,490 feet and came in a big well estimated at from 600 to 700 bbls. His No. 1 Sue Denman came in for about 8,000 bbls. but No. 2 is nevertheless a good well and indicates it is probably possible to go farther to the southwest for more wells. Humble has been drilling in the other direction to the northeast and closing up the gap between the field and the extension.

Two new important tests are scheduled for the upper regions of the Balcones fault zone. Bill Cain is understood to have arranged the preliminaries for a 5,000-foot test in Falls County near the Robertson County line a little west of Bremond and just south of the railroad. He has a 5,000-acre block. It is north of the Brazos River which is taken as the boundary between the Edwards lime and Woodbine sands as producing horizons. One of the major companies is understood to have renewed its leases over a period of 15 years on this district and lately renewed them for another five-year term and Cain gets part of that block.

In southern Milam County between Thorndale and Rockdale on a big block of acreage Peyton Brothers of New Mexico are shaping things up and getting ready to make a location for a test that will go to the Edwards lime.

Deep Test in Gas Ridge

Another important deep test in the Balcones fault zone is American Gas Co.'s No. 1 W. H. Kennon, in Gas Ridge in about the center of the field that is producing gas from the Austin chalk. The location is 1,750 feet from the south line and 2,000 feet from the east line of the 400-acre tract and it will test formations below the Edwards.

The Edwards lime in that field carries fresh water in one test drilled and was topped at 1,390 feet. The Edwards will be only a few hundred feet thick and the test will be aimed at the Trinity principally. The American Gas Co. is composed of those who originally constituted the Southern Natural Gas Co. which put natural gas into San Antonio and was later sold to the Moody-Seagraves interests. They include Albert R. Jones and Leroy Snyder of Kansas City, and W. H. Kennon and H. A. Pagenkopf of San Antonio, and others.

McMullen Gets a Well

Three new pools were proven in Southwest Texas last week. Bob Rose's No. 1 Pierce and Webster's No. 1 McCrory each proved pools in Caldwell County, and Jacob, Buzzini & Pickett's No. 1 Leonard Jacob in northeastern McMullen County at 962 feet in sand from 958 feet is estimated, now that the tubing is set, at around 75 bbls. a day. It is at the north end of the Calliham area and near gas wells completed at less depth which produced into the line to San Antonio for years.

The new well is about 4 miles north of the Calliham oil field which is at the south end of the gas area. It is understood some further drilling will be done at once in the district to develop the pool.

Duval County

Over the week-end it was expected that John F. Camp would test his No. 1 Weil in Duval County about 1½ miles south and slightly west of Smith & Capps' No. 1 Duval County Ranch Co., discovery well. Camp set casing at 2,428 feet with total depth 2,438 feet and was unable to get a satisfactory drill stem test but had a good showing of oil. Lying a little to the east he seems to have a pretty good chance of getting an oil well as well as extending the field. Gas lies to the west of oil production in both the Government Wells Pool and the extension north of the new pool. Total depth of Smith & Capps' well is 2,413 feet.

Operations in northern Duval are waiting somewhat on the results in the Camp well. Hynes & Nessly, 5½ miles southwest of Camp, are shut down for lack of water, and French Oil Corp.'s No. 1 Flores, 6½ miles southwest of Hynes & Nessly, was last reported at around 1,500 feet.

North of the Government Wells Pool, Suttle and others' No. 1 Bennett got salt water in the Cole sand at 1,603-08 feet. It was in this sand at 1,567-74 feet that Seacord & Putnam's No. 1 Johnson, a half mile west and slightly north of Suttle came in for 10,000,000 feet of gas, opening a new pool. Suttle is drilling deeper and will go to the horizon that is producing oil at around 2,350 feet in the Government Wells extension pool.

Other than this activity along the Reynosa Escarpment the only test of interest in Duval County is Cole Petroleum Co.'s No. 75 Benavides in Block 8, Section 19, of the Cole Field, which has cored all the depth from 1,500 feet and is now last reported at 4,820 feet. It is being cored to obtain a good log of the field in the lower formations.

Zapata Test Sets Casing

Ballard & Mercer's No. 1 Flores, in Block 27, of Porcion 37, in western Zapata near the river and a little northeast of the town of Zapata, after working for a month at 2,497 feet got a drill stem test showing nine joints of oil and mud and has set casing. Some gas in that part of Zapata was found a few years ago at much shallower depth but otherwise the western part of Zapata because of the difficulty in getting into it with a rig, for one reason, has not been visited much by the wildcatter. Ballard & Mercer were due to test over the week-end or else early this week.

Starr County

The main disappointment in southern Starr County up to the first of this week was O. W. Killam's No. 1 Woods, 3 miles southeast of Heard & Heard's discovery well. At around 1,500 feet it had not yet found any production. Heard & Heard completed their discovery well, No. 1 Goodrich, at 1,382 feet.

These tests are all influenced by the same conditions that dictate the trend of fields elsewhere in the Reynosa Escarpment outcrop zone. In this part of the territory in southern Starr County the Reynosa Escarpment runs northwest and southeast and hence operators are playing that theory and Killam was pretty well located as regards that theory.

Operators now are playing every angle of the field and starting or planning tests in every direction over south and west Starr County. Coast Oil & Gas Co. is down a few hundred feet and drilling on No. 1 Kelsey Bass in the north end of Porcion No. 86 about 6 miles northeast of Heard & Heard's No. 1 Goodrich. Stryalls Oil Corp.'s No. 1 Salinas, 3½ miles northwest of Heard & Heard, that was shut down for a time has been drilling the past two weeks and is last reported at 1,895 feet. San Marcos Development Co. is going to drill about 1 mile north of Roma, 12 miles west of the Heard & Heard test, and others are framing up for a test about 5 miles north of that. Some California people are arranging to drill a half mile due east of Rio Grande City, and Brady Drilling Co. has secured a lease on the parks and streets of Rio Grande City and will drill a test on one of the plazas of the city.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

Week Ending April 23

ATASCOSA COUNTY

Company, farm and location—	Remarks:
American Central Oil Co.'s No. 2 Mary McConnell, 150 ft. W of E line, 300 ft. S of No. 1, Blk. 138, W. C. M. Baker Sur., 3 miles W and 6 miles S from Somerset	T.D. 1,660 ft.; standing.
Glen Mathis' No. 2 Mrs. C. Martin, 100 ft. SE of No. 1	T.D. 3,240 ft.; drlg.

BASTROP COUNTY

I. L. Champion's No. 1 Owens, 500 ft. to SE line, 600 ft. to SW line of 628-ac. tract, Isaac Conner Sur.	Location.
Lonnie Evans and Dan Auld's No. 1 D. J. Orgain, 2,100 ft. from NW line, 2,775 ft. from SW line of Addison Littleton League	Location.
E. R. Marts and W. J. Beavens' No. 1 R. L. Carter, 450 ft. from NE line, 150 ft. from NW line of 100-ac. tract in George J. Glasscock Sur.	T.D. 2,240 ft.; testing Serpentine.

BEE COUNTY

Humble O. & R. Co.'s No. 1 Laura Thompson, 6,360 ft. from N line, 15,100 ft. from W line of tract in Garrett Roache Sur., S part of county	T.D. 5,310 ft.; washing down.
J. L. Mauldin's No. 1 Kimball, 300 ft. NE of Grayburg Oil Co.'s No. 1-A Kimball in S. Winship Sur.	Location.
Texas Gulf Producing Co.'s No. 1 Webb Hearn, 1,000 ft. N, 43 degrees E, thence 300 ft. NW at right angles from Huriburt's No. 1 Wood in P. T. Irrigation Co. Sur.	Drlg. water well.

BELL COUNTY

J. W. Riley's No. 1 W. S. Chaffin, in M. Griffin Sur.	T.D. 450 ft.; S.D.

BEXAR COUNTY

Amsden-Ingersoll-Miller's No. 1 Strumberg, 450 ft. to W line, 1,020 ft. to N line of tract, 12 miles SW of San Antonio	T.D. 810 ft.; S.D.
Lloyd Bender's No. 1 Suburban Irrig. Farms, 800 ft. No. of cen. of N line of K. K. Herring tract, 1 mile E of Kirk ¼	T.D. 70 ft.; set surface csg.
S. W. Blount's No. 1-A S. A. Land & Dev. Co., 10 ft. from No. 1 in I. Perez Sur.	T.D. 600 ft.; drlg.
Eckert et al's No. 1 Edwards, 150 ft. to N and W lines of farm in Martinez Sur.	T.D. 1,490 ft.; standing.
Jones & Volts' No. 1 Bonkowsky, 150 ft. to N and W lines of William McMenenes Sur., 12 miles E of San Antonio	T.D. 907 ft.; standing.
Dr. Ewell Neil's No. 1 J. Watson, 500 ft. from W line, 1,700 ft. from S line of B. Martinez Sur.	T.D. 2,495 ft.; in Edwards, dry
Schneider, Rees et al's No. 2 Claussen, 12 miles NE of San Antonio	T.D. 1,230 ft.; S.D.

BROOKS COUNTY

Allen & Morris' No. 1 Lasater, NW part of county, 450 ft. to NE line, 7,325 ft. to SE line of 962-ac. tract	T.D. 150 ft.; drlg.
Ed East's No. 1 A. Garcia, 600 ft. from N and E lines of 2,168-ac. tract in SW part of county	T.D. 85 ft.; set surface csg.

(Continued on Page 70)

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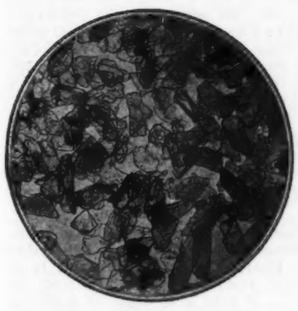

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Montgomery County Interest Revived

Second Test Nearing Producing Horizon. Gueydan Dome Test Disappointing So Far. Continued Increase in Operations

By Neil Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., May 2.—Interest of Gulf Coast operators again is being centered on the Conroe district of Montgomery County where Strake Oil Corp.'s No. 2 South Texas Development Co., the second test drilled there since the discovery well, is nearing the producing horizon. Within the next 10 days, if all goes well, the outcome of this test should be known and something more definite revealed as to the geological nature and importance of the territory.

This test, approximately 2,200 feet south from the discovery well, No. 1 South Texas Development Co., the past week picked up the first sand which was found by the latter around 4,125 feet but which tested salt water. The same horizon in the present test was topped at 3,967 feet, or approximately 160 feet high. A drill stem test was made in the horizon from 3,967-4,022 feet in which the drill stem filled 25 fourbles of mud showing oil and gas.

With lease activity and interest in that area somewhat subsided since the completion early in April of Heep Oil Corp.'s No. 1 Cartwright as a wet gas well, much now is banked on the second Strake well for the renewal of the play there. The Cartwright well, a mile and a half east of the Strake discovery well, had been booked for an oil producer, but when it came in a wet gasser, much like the first well, the district "cooled off" in the eyes of boom traders.

During the past 10 days, Heep Oil Corp. has started up operations in two additional tests, No. 1 Freeman, southeast of this company's Cartwright well, and No. 1 Roberts, a key test for northward trend possibilities. Several other locations are reported to have been made although these have not been made known definitely. Thus, while leasing has quieted, the district is due for a thorough development.

Gueydan Salt Dome

Pure Oil Co.'s No. 2 Alliance Trust Co., completed April 22 as the discovery well of the Gueydan salt dome in Vermillion Parish, Louisiana, so far has turned out a little disappointing. The well, which came in flowing initially at the rate of 800 bbls. of pipe line oil daily, after a week on production was flowing only 204 bbls. net oil with the total fluid being about 42 per cent salt water, this being through a five-sixteenths inch choke. A short time after completion the well started showing salt water, this increasing to better than 20 per cent of the fluid within a short time. Changes in chokes resulted in much of the water being cut back for a time but since then the water content has steadily increased with the decline in oil production.

As reported in last week's issue of The Oil and Gas Journal, this well, the fourth test on the dome, was completed in sand at 3,532-52 feet with 28 feet of 6⅝-inch screen in the hole. The oil is approximately 25 gravity and of desirable quality, yielding a gasoline of better than 66 octane number and having a 32 per cent lub content. Whether the well will be killed to workover or deepen has not been determined at this time.

Hankamer Field

Gulf Production Co. added another good well at its Hankamer Field, southern Liberty County, with the completion of No. 15 Boyt flowing 1,500 bbls. of pipe line oil through a half inch choke from sand at 4,400 feet. This marks the fourteenth producer completed in the field, all on the Boyt tract. The new well extends production eastward 500 feet.

Orange County

The Texas Company also boosted its production materially at Port Neches, southwestern Orange County, with the completion of No. 3 Kuhn, which flowed at the rate of 67 bbls. per hour for the first eight hours before being cut back. This one joint of 4¾-inch screen was set at a total depth of 4,118 feet. The second new producer there within three weeks, it makes an important extension of the producing area southward.

The Texas Company's No. 1 Polk-Kuhn-Glass, a deep test at Port Neches, has been shut down temporarily at 6,965 feet, at which depth it was in a dry sand and shale. The company's No. 2 Kuhn, originally completed in sand at 4,412 feet, has been plugged to 4,313 feet, where casing was perforated at 4,302-97 feet, preparatory to bringing the well back in. These operations mark the first work at Port Neches in over a year and a half.

Other Completions

Among other completions on the Gulf Coast during the week were Yount Lee Oil Co.'s No. 26 Cade, High Island, Galveston County; Texas Gulf Producing Co.'s No. 9-B Kirby, Barbers Hill, Chambers County; and The Texas Company's No. 2 Belcher, Manvel, Brazoria County. Rio Bravo Oil Co. also got a small pumper at Saratoga, Hardin County, in No. 134-A Cotton; Republic Production Co. completed its No. 63-A Dolbear, Hull, Liberty County, as a dry gas well; and Weir Oil Co.'s No. 4 Wright, a deepened well at Goose Creek, Harris County, was put on the pump for 300 bbls. of fluid, 95 per cent base sediment and water.

The High Island well, the largest of the group, came in flowing 932 bbls. of pipe line oil in the first 24 hours through a three-eighths-inch choke. It is one of a series of good wells which have been completed by Yount Lee Oil Co. in a recently opened deep sand.

Barbers Hill

The Barbers Hill producer marks another addition to the shallower sand wells on the northeast side of the dome where drilling is centered on moving closer and closer into the center of the dome and where the sands are found high up under the salt overhang. This new well, Texas Gulf Producing Co.'s No. 9-B Kirby, is in sand at 4,220-38 feet, in which 38¾ feet of 5-inch screen was set. It flowed initially 780 bbls. of pipe line oil through small chokes.

Of particular interest at Barbers Hill at this time, however, is Mills Bennett Production Co.'s No. 1-B Gulf fee, which late in the week was still drilling in salt in an effort to prove up the overhang in that particular portion of the dome, on the extreme south side. Salt was topped in this hole at 1,706 feet and at latest report the hole was in salt at 4,740 feet. At that depth 3,034 feet of salt had been drilled, which is a record amount on that dome. The overhang, if one existed at that point, was expected to be thick. The test is well inside toward the center of the dome from the line of deep sand producers drilled several years ago there off the edge of the dome.

Another test being watched at Barbers Hill is Rio Bravo Oil Co.'s No. 3 Fisher, which on the west side of the dome is attempting to do what Bennett's Gulf fee test is trying to do on the extreme south side. The Fisher test, located well up on the dome from the deep wells off the edge late in the week was drilling cap rock at 3,789 feet. Some of the deep wells, farther out, have gone through a cap rock ledge and back into formation but none has yet drilled through a salt overhang there.

Manvel

The Texas Company's No. 2 Belcher, second well at Manvel, Brazoria County, was brought back in the past week flowing at the rate of 55 bbls. an hour but showing 28 per cent b.s. and water. Pressure of the well was 1,575 pounds on the casing and 625 pounds on the tubing. The well originally was completed early in March at 5,602 feet. It later was deepened to a total depth of 5,736 feet but was plugged to 5,685 feet, the present depth. Gas from the discovery well, No. 1 Belcher, was used to bring No. 2 back in, the well having failed to respond to swabbing.

Iowa Test

Shell Petroleum Corp. late in the week was drilling plug in its No. 2 Heyd at Iowa, Calcasieu Parish. This test, the second on the prospect and a south offset to the discovery well, Magnolia Petroleum Co.'s No. 1 Waite, has been standing cemented several weeks pending arrival of a special string of tapered tubing, the first ever used on the Gulf Coast. The test will be made in sand at 6,972-79 feet, the same horizon from which the discovery well is producing. Bottom of the latter is 6,971 feet. Shell's No. 1 Fontenot, east offset to the discovery well, in the meantime is nearing the producing horizon and at latest report was drilling sandy shale at 6,790 feet.

Pierce Junction

Pure Oil Co. and Moody Corp.'s No. 1 Herman, southwest flank of Pierce Junction, Harris County, is preparing to test a good looking sand at 4,518-59 feet. Bottom of hole is in shale at 4,561 feet. This is the first test drilled in that particular area within the past two years.

Increased Drilling

The week was marked by continued increase in drilling activity generally throughout the coast, not only in the fields but also in wildcat areas. There also has been considerably more new leasing with several of the larger companies taking sizable blocks in numerous areas, including not only the salt dome district but also in the lower coastal country and also along the so-called "Jackson" trend easterly through that tier of counties just north of the salt dome counties, namely San Jacinto and Trinity.

GULF COAST FIELDS AND WILDCATS

Week Ending April 29

BARBERS HILL—CHAMBERS COUNTY

Company, farm and location—	Remarks:
R. E. Ferrell's No. 2 Wilburn, Henry Griffith League, 215 ft. W of No. 1 in center of 45-acre tract	T.D. 2,476 ft.; sidetracked 1,875 ft.; and drlg rock 1,900 ft.
Gulf Prod. Co.'s No. 8 Wilburn, Henry Griffith League, W of No. 7	Drlg. shale and lime 2,929 ft.
Humble Oil & Ref. Co.'s No. 1 Kirby, Henry Griffith League, 520 ft. N along E line from SE cor. of tract, thence 75 ft. W at right angles, thence 75 ft. N at right angles	Location.
McAlbert Oil Co.'s No. 2-B Higgins, Wm. Hodges Sur., 265 ft. from N line and 50 ft. from W line of tract	Drlg. salt 1,530 ft.; top of salt 1,470 ft.
Mills Bennett Prod. Co.'s No. 1-B Gulf fee, Wm. Bloodgood Sur., 500 ft. E and 50 ft. N of SW cor. of "B" lease	Drlg. salt 4,740 ft.; top of salt 1,706 ft.
Mills Bennett Prod. Co.'s No. 4-A E. W. Barber, Henry Griffith League, 300 ft. W of No. 3-A, 50 ft. N of S line	Location.
Mills Bennett Prod. Co.'s No. 3 J. C. Means, Henry Griffith Sur., 300 ft. W of No. 2 in center of strip	Coring hard sand, showing oil, 4,239 ft.
Rio Bravo Oil Co.'s No. 2 Fisher, Wm. Bloodgood Sur., 300 ft. E and 33 ft. S of NW cor. of tract	Drlg. rock 3,789 ft.
Sinclair Oil & Gas Co.'s No. 12 Wilburn, Wm. Hodges Sur., 150 ft. W of No. 10 and 50 ft. N of S line	Drlg. salt 2,616 ft.; top of salt 1,386 ft.
Sun Oil Co.'s No. 7 Chambers (W.O.), Wm. Bloodgood Sur.	Drlg. sand and shale 5,025 ft.
Sun Oil Co.'s No. 14 J. Wilburn, Henry Hodges Sur., 150 ft. W of No. 13 and 50 ft. from N line	Drlg. salt 2,163 ft; top of salt 1,462 ft.
The Texas Company's No. 6 Wilburn (D.D.), Henry Griffith League	T.D. 5,197 ft; plugged to 5,130 ft.; set screen 5,129 ft.; swabbed little oil and water; pulling screen.
Texas Gulf Producing Co.'s No. 9-B Kirby, Henry Griffith League, 50 ft. out of SW cor. of J. M. Fitzgerald 50-acre tract and 110 ft. S of N line of Kirby tract	Set 38¾ ft. of 5-in. (O.D.) screen 4,238 ft.; comp. flowing 780 bbls. P.L. oil, 50 to 75 lbs. pressure, 21-32 and 19-32 in. chokes.
Texas Gulf Producing Co.'s No. 7-A Barber, Henry Griffith League, 712 ft. from W line and 225 ft. from N line of tract	Drlg. salt 4,536 ft.; top of salt 2,920 ft.
Texas Gulf Prod. Co.'s No. 3 Ilfrey, Henry Griffith League, 260 ft. W of No. 2 in center of tract	Spudded.

DAMON MOUND—BRAZORIA COUNTY

Intercoastal Oil Co.'s No. 9 Wisdom, S 45 deg. 312 ft. from NE cor. Lot C, Blk. 62, A. Darst Sur., and thence S 45 deg. 325 ft. in Lot A	Drlg. lime and shale 3,917 ft.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 15 Mayes, E. Wallis Sur., 450 ft. NE of No. 11 and 450 ft. NW of No. 14	Sticky shale 980 ft.; cmtd. 13-in. csg.

BLUE RIDGE—FORT BEND COUNTY

Coronado Oil Co.'s No. 3 Blakely, 200 ft. E of No. 2 in Lot 9, Blk. D, E. Drew Sur.	Drlg. gumbo 1,170 ft.
Gulf Prod. Co.'s No. 19 Luscher, Thos. Habermacher Sur., 1,650 ft. from N line and 550 ft. from E line of 490-acre tract	Drlg. hard sand 5,022 ft.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co. and Humble Oil & Ref. Co.'s No. 2 Booth, Samuel Kennedy Sur., 475 ft. from S line and 600 ft. E of No. 1	Drlg. shale 4,830 ft.

(Continued on Page 72)

Rocky Mountain Operations Increase

Hobbs, New Mexico, Operators Sign New Proration Agreement. Test in Converse County, Wyoming. Much Interest in Colorado

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., May 2.—Drilling operations in the Rocky Mountain area are showing an increase with a number of new locations being staked and wells shut down for the winter resuming.

In New Mexico, all the operators in the Hobbs Pool have signed the new proration agreement. The Texas Pacific Coal & Oil Co. made a location on the northwestern side of the pool. One new location in the Jackson area in Eddy County was made by Leonard & Levers in their No. 7 State-Levers.

In Wyoming, a test of the Keeline-Shawnee structure in Converse County is scheduled to start within a few weeks. Three locations were spotted on the North Casper Creek Dome in Natrona County, another on the Byron Dome in Big Horn County and another is being staked in the LaBarge district in Sublet County. The Midwest is resuming at Elk Mountain and the Doheny interests are resuming in the Aspen district.

In Montana, the Ohio Oil Co. made a new location a mile northwest of production on the Dry Creek Dome. Its No. 2 Montana Industrial found the Dakota dry. The California Co.'s No. 1 Ross in Liberty County is being abandoned.

Colorado had numerous rumors of wells in the northeastern part of the State in which two tentative locations were suddenly cancelled. Ramsey Brothers are reported preparing to drill in the New Raymer district and the Tulsa-Fort Morgan Petroleum Co.'s test is ready to spud. A deal was closed which insures some additional drilling in the Tow Creek Field.

NEW MEXICO

Lea County

E. G. Allen, chairman of the proration committee, has advised Governor Arthur Seligman that all operators in the Hobbs Field have signed the agreement recently submitted by the governor and that it is being forwarded to Dr. E. H. Wells, state geologist, for his signature. The agreement is practically the same as the one signed last January by the operators and James F. Hinkle, commissioner of the state land office, except that the state geologist is given the authority to withdraw from the agreement in behalf of the State at the end of six months upon giving 30 days' notice. It runs for a year from January 10, 1932.

Midwest Refining Co.'s No. 8 Turner, C NW SW, Section 34-18-38, on the southeastern side of the Hobbs Pool and in the Hobbs townsite, which was reported a completion last week, will be given another test through tubing to establish its potential for proration purposes. The first test was through the casing in which it flowed at the rate of 6,269 bbls. of oil and 2,090 bbls. of water. It is believed the well will show much better after having thoroughly cleaned itself of drilling water.

One new location in the Hobbs Pool was reported in Texas Pacific Coal & Oil Co.'s No. 3-G State, C SE, Section 24-18-37. It is an outside location on the northwestern edge of the pool, one-fourth mile to the northwest and the same distance southwest of the company's Nos. 1-G State and 2-G State, the nearest producers.

Amerada Petroleum Corp.'s No. 1 Hardin, SW cor., Section 18-18-38, an outside well on the north, is bottomed at 2,781 feet in anhydrite at which depth the 10¾-inch was cemented with 450 sacks.

Midwest Refining Co.'s No. 29 State, C SW SW, Section 10-19-38, in the southeastern part of the field, probably will be the next completion. It is bottomed at 4,044 feet in lime waiting on cement to harden. The 8⅝-inch was cemented at 4,035 feet with 135 sacks. Midwest's No. 8 Terry, C NW SW, Section 10-19-38, is drilling at 3,312 feet in anhydrite. It topped the brown lime at 2,800 feet and had first gas at 2,865 feet. There was an increase in gas at 3,238-42 feet.

Eddy County

One new location in Eddy County was reported in Leonard & Levers' No. 7 State-Levers, C SW SE, Section 20-17-29, in the Jackson area, west of the gas wells drilled by this company.

One well began spudding in W. A. Scott's No. 1 Kaiser, NW SE, Section 7-18-27, in the Artesia area to the west of the Compton Pool. The Etz Drilling Co. has the contract on an acreage basis, and Flynn, Welch & Yates furnished the casing for an acreage interest. It is on patented land.

Grayburg Oil Co.'s No. 3 Burch, C SW NW, Section 19-17-30, in the Jackson area, is drilling at 2,927 feet in lime and had another show of oil at 2,880 feet. It is an offset on the north to the same company's No. 2 Burch, a producer.

New Mexico Oil Syndicate's No. 1 McClelland, a location that was abandoned, but which is to be drilled following a reinstatement of the permit, is a location in the SW NW NE, Section 22-22-23, 25 miles west of Carlsbad. The footage is 884 feet from the north line and 2,391 feet from the east line.

Avalon Oil Co.'s No. 1 State (Paul), NE cor. SE, Section 26-20-27, southwest of the Getty Pool, is drilling at 685 feet in white lime.

Curry County

G. W. Trout and others' No. 1 Hart estate, NW SW NW, Section 24-2n-31, is drilling at 882 feet in black shale and carrying 6⅝-inch on bottom.

DeBaca County

Matador Oil Co.'s No. 1 Woods, NE SW SW, Section 6-4n-20, Salada Creek, now in charge of George E. Montgomery, of Amarillo, Tex., is reported shut down for drilling line at 4,360 feet.

Landowners Oil Co.'s No. 1 McAdoo, SW cor. NE, Section 16-1s-27, Buffalo Creek, is shut down at 4,702 feet installing new engine.

San Juan County

Continental Oil Co.'s No. 17 Santa Fe, C NE, Section 2-29-19, Rattlesnake Dome, is bottomed at a total depth of 6,985 feet and is pulling tubing following the collapse of the packer. It swabbed around 50 bbls. of oil plus considerable water before shutting down to run tubing. Same company's No. 24, SW NW SW, Section 1-29-19, is coring at 7,265 feet. Its No. 28, CNL SW, Section 12-29-19, is at a total depth of 958 feet and cemented the 6⅝-inch at 755 feet to test a sand in the Dakota at 873-81 feet.

Kutz Canon Oil & Gas Co.'s No. 1 Day, SW cor., Section 20-28-10, Kutz Canon, is shut down at 3,800 feet waiting for new drilling line.

WYOMING

Converse County

Drilling operations in the Big Muddy Field, east of Casper, which have been at a standstill since the Ohio Oil Co. and the Continental Oil Co. each completed a well in the Lakota sand last year, are being resumed. Continental Oil Co. is staking a location for its No. 30 Glenrock Sheep, SW SE SE, Section 4-33n-76, and will drill with rotary equipment. This location is an offset on the north to Ohio Oil Co.'s No. 5 Jones which was completed at 4,364 feet in the Lakota early last year for an initial production of 345 bbls. per day. Only two wells have been drilled to this horizon in the field.

A test is scheduled to be drilled on the Keeline-Shawnee structure east and southeast of Douglas this spring and preliminary work is expected to start within a few weeks. It is probable the first test will be a joint operation financed by several major companies who have holdings on the structure. Phillips Petroleum Co. has a large block on which it drilled more than a dozen core holes to work out the geology. In at least one of these on the NE, Section 27-32-69, a flow of 1,000,000 feet of gas was encountered at 360 feet. Several of the holes showed saturation. Last year Ohio Oil Co. acquired a block of 1,500 acres east of the Phillips acreage and several other companies have holdings.

John Ackard, of Colby, Kans., has acquired the 240-acre lease in the old Brenning Basin Field west of Douglas from Bell Springs Oil & Gas Co., of Rapid City, S. Dak., including a small skimming plant, and proposes to drill seven wells. There are five shallow wells on the tract making around 1 bbl. each per day. Last year Mr. Ackard made a location for another well on this tract for the Three C's Oil Co. The Brenning Basin Field has had a number of owners since it was extensively promoted in 1917.

Weston County

There were no completions in Osage this week. Jones-Rose Syndicate's No. 2, CWL SW NE, Section 21-46-63, is drilling at 240 feet, and Chadron-Osage Oil Co.'s No. 16, CWL NW SW, Section 14-46-64, is drilling at 1,760 feet. Federal Oil Co.'s No. 2, CEL NE SE, Section 15-46-64, is drilling at 700 feet.

Julius Peters and others' No. 1 Witzell, SE cor. NW, Section 30-46-64, Fiddler Creek, is bottomed at 3,360 feet and underreaming 8¼-inch.

Natrona County

Mutual Oil Syndicate's No. 2 C SW SE, Section 14-35-79, Midway Dome, is drilling below 4,400 feet. It is due for completion in the second Frontier about the middle of May.

Lakota Oil & Gas Co. (Weismann and others) is preparing to resume operations on the North Casper Creek structure early in May. Locations for three wells have been spotted by C. T. Lupton, geologist, of Denver.

Jarvis & McDonald's No. 1 Government, SE cor., Section 31-30-81, Spindletop Dome, is drilling at 510 feet.

Carbon County

Lost Soldier Producing Co.'s No. 1, NE NE, Section 25-26-88, Mahoney Dome, on the north side of the field, is drilling at 3,780 feet in the base of the Sundance and showing an increase in oil and gas, but not in sufficient quantities to flow the well.

Uinta County

Trans-Western Petroleum Co., Ltd.'s No. 1, C SE, Section 6-14-118, Aspen district, is preparing to resume after being shut down for the winter at 3,216 feet.

Fremont County

Ward Oil & Gas Co.'s No. 2, NE cor., Section 28-34-90, Dutton Basin, is rigging up rotary. Whipple Drilling Co. has the contract.

Sublet County

Calmonica Petroleum Corp. is preparing to drill another well on the Elkhorn Oil Co. permit in Section 27-27-113, LaBarge district. The Department of the Interior has given permission to produce No. 1, which was completed last year. The department also has requested the permit holder to select the primary acreage for lease under the permit.

Big Horn County

Taylor Oil Co.'s No. 1, SE SE, Section 25-56-97, Byron Dome, is a new location. Rotary rig which has been standing for some time in the Oregon Basin Field, is being moved in.

Carbon County

Midwest Refining Co.'s No. 27 Union Pacific, NW SE SE, Section 11-20-81, Elk Mountain, which has been standing at 4,020 feet since last December, is preparing to resume. Rotary tools will be installed at this depth.

MONTANA

Carbon County

The Ohio Oil Co. has made a new location on the Dry Creek Dome which will test out the field about a mile northwest of the nearest producer. Derrick is up and materials are being moved in. The location is on the Henry Bowman tract in the C SE NE, Section 4-7s-21. It will be drilled with a rotary.

Ohio Oil Co.'s No. 2 Montana Industrial, C NW SE, Section 11-7s-21, proved a disappointment in the Dakota and is drilling ahead to test the Lakota. It is bottomed at 5,354 feet, at which depth it is through the Dakota. That horizon was barren, showing neither oil, gas nor water. Same company's No. 1 Caldwell, CEL NE SE, Section 12-7s-22, is drilling at 2,000 feet, and its No. 2 Robinson, C SE SE, Section 3-7s-21, is drilling at 3,700 feet.

Carbon Oil & Gas Co.'s No. 1 McMinn, NW SW SW, Section 7-7s-22, set the pipe at 4,234 feet on top of the second Frontier. The hole was showing considerable gas.

Ohio Oil Co.'s No. 1 Kuchinski, NW SE NE, Section 15-7s-22, Golden Dome, is waiting after cementing casing at 5,923 feet on top of the Dakota.

Liberty County

California Co.'s No. 1 Ross, NE SE NE, Section 3-33-6e, Utopia district, is being abandoned at a total depth of 3,337 feet in the Madison lime. It had a water sand at 3,226-70 feet after going through a dry sand at 3,208-18 feet. The location is 1¼ miles north of No. 1 Eleanor, which last year had some good shows in the above sands.

Northland Oil & Gas Co.'s No. 1 Yurman, C SE SW, Section 32-33-5e, Liberty district, is bottomed at 3,815 feet and bailing water in an effort to keep the hole from caving.

People's Oil & Gas Co.'s No. 1 First National Bank, C SE NW, Section 17-36-6e, Bear's Den, has recovered part of the casing in the hole and will try to sidetrack the remaining 750 feet. Total depth is 2,000 feet.

Pondera County

Bell & Adams' No. 1 Venetz, NE SE NE, Section 31-27-3w, South Pondera, has rig completed, and Teton Corp.'s No. 3 Jones, C NW NE, Section 17-27-4w, is drilling below 200 feet.

Glacier County

R. C. Tarrant's No. 1 Hagland, NW cor. SW, Section 13-34-6w, Cut Bank district, has resumed at 2,559 feet in the top of the Kootenai. At this depth 8¼-inch was cemented before shutting down for the winter. The 12½ and 15-inch have been pulled.

J. T. Finn's No. 1 McLellan, NW cor. SE, Section 12-34-6w, is rigging up rotary.

Milk River Petroleum Co.'s No. 1 Blackfeet, SW NE NE, Section 28-36-12w, Milk River district, is bottomed at

2,956 feet and has let contract to Sheldon-Burton Rotary Drilling Co. to complete. Rotary has been shipped. This operation recently was taken over from Fulton Petroleum Co.

Teton County

California Co.'s No. 1 Sullivan, NW NE NW, Section 34-27-7w, Bynum district, is rigging to resume at 2,840 feet after been shut down for the winter.

Toole County

Askalta Oil Co.'s No. 3 Farbo, C SE NE, Section 2-37-4w, Buckley-Border Field, is moving in materials.

In the Kevin-Sunburst Field, Missoula-Kevin Oil Co.'s No. 1 Davidson, SE cor. NE, Section 28-35-3w, is drilling at 200 feet, and Huso Brothers' No. 4 Levnick, SW NW, Section 27-35-1w, is ready to spud.

Oregon Oil Syndicate's No. 1 Barthelote, SW NE SE, Section 20-36-2e, Barthelote district, is drilling at 2,472 feet.

COLORADO

Weld-Morgan Counties

It looked for a while this week as if the long-awaited spring drilling campaign in northeastern Colorado was away to a good start and then the news faded into the rumor stage. Early in the week it was reported that Reiter-Foster Oil Co. had signed a release on the first call on any oil developed on the Niles tract of 320 acres in the E half, Section 13-6n-61, in the Greasewood Field under its agreement with Platte Valley Petroleum Co. This tract offsets on the east the Briggs tract upon which there is one producing well, Continental Oil Co.'s No. 1 Briggs, C SE SW, Section 13, the best well in the field. The Niles land was held by the Platte Valley company, but several weeks ago Henry Niles served notice of cancellation of the lease upon the Platte Valley company and brought suit for loss of royalties through failure to drill. The Reiter-Foster call on the oil had proved a hindrance in getting the lease developed. It appeared that these difficulties had been ironed out and Ohio Oil Co. was reported to have made a tentative location in the NE NE, Section 13 and a diagonal offset on the Butters tract in the C SW SW, Section 7-6n-60, across the line in Morgan County. Then it became known that both of these locations had been cancelled and that the company probably would make one in Section 12-6n-61, upon which it has held the lease for some time.

In the meantime members of the executive committee of the Platte Valley company are in the East where it is understood they are attempting to finance its own drilling campaign in Greasewood. The involved situation means that it may be some time yet before there will be any definite announcement of plans for drilling in the Greasewood Field.

One well is definitely assured in the New Raymer district in Morgan County, where Tulsa-Fort Morgan Petroleum Corp. is rigging up for its No. 1 Anthes, C NE NE, Section 24-8n-59, to the northwest of New Raymer. It is planned to begin spudding not later than April 30.

Another well in this same district, but south of the Tulsa-Fort Morgan operation, is expected to get under way shortly. Ramsey Brothers are reported to be preparing to drill in the N half, Section 14-7n-59, and a rig for this operation has arrived on the sidetracks at Buckingham. Rumors have it that Manning & Terry will drill the well, but there is no verification yet of either the exact location, or who will do the drilling. Ohio Oil Co. has moved in a core drilling outfit to work out the geology on the Buckingham Dome and it is not unlikely this outfit has been mistaken for the Ramsey rig.

Weld Royalties Co.'s No. 1 Kesta, SE cor., Section 28-9n-61, Keota district, is expected to begin preliminary work the coming week. A rig has been shipped by truck from Wyoming. The company has a block of 6,000 acres surrounding the location.

Rio Blanco County

The California Co.'s No. 1 California-Raven, NW SE, Section 30-2n-102, Rangely Dome, is drilling at 4,950 feet.

Adams County

Hills Dome Lease Development's No. 1 Hills, SE cor., Section 27-3s-64, near Watkins, is bottomed at 4,025 feet and is preparing to cement 8¼-inch at 3,985 feet. A string of 6⅝-inch will be run.

Arapahoe County

MacDeb Drilling Co.'s No. 1 Fitzsimmons, NE, Section 7-4s-66, near Aurora, stopped at 5,983 feet to cement the underreamer lugs which were sidetracked last week into the walls. Twelve sacks of cement were put into the hole.

Routt County

The Tow Creek Field, near Steamboat Springs, in which no drilling has taken place for some time, is expected to become active again as result of a deal closed this week. Denver oil men have leased to W. R. Blackburn and the Siler Drilling Co., of Amarillo, Tex., 240 acres in the SW and S half NW, Section 18-6n-86, and a well is to be started as soon as weather permits. The tract, which is state land, offsets on the west a tract upon which there are two producing wells. The Texas Company is reported to have offered to drill the tract on a fifty-fifty basis. Tow Creek is producing 250 to 350 bbls. per day from the Mancos shale.

Fremont County

Canon Heights Oil Co.'s No. 2 Harding, NW SE NW, Section 21-18-70, Orchard Park, is bottomed at 3,160 feet with a hole full of water and a fishing job on hand.

Larimer County

Mayer Oil Co.'s No. 1 Reed, SW cor. NW, Section 28-4n-69, Berthout district, is drilling at 3,700 feet and carrying 6⅝-inch.

Three Tests in Athabaska District

First to Spud Early This Month. Reopening of Fort Norman Field. Conservation Board to Handle Turner Valley

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Apr. 30. — In northern Alberta, F. H. Stover & Son of Chatham are moving drilling equipment from Smith via the Athabaska River to acreage of Athadome Oils, Ltd., below Mirror Landing. The Stover firm has the contract for a series of three tests on the Athadome acreage, the first to spud in early in May.

Athadome Oils, Ltd., was incorporated recently with office at Toronto. Officers include Senator E. Michener, president of Commonwealth Petroleums, Ltd., of Calgary; Senator Rufus H. Pope, of Cookshire, Quebec; and Senator A. Giles of Whitewood, Saskatchewan; while Ontario directors include James Lyons, Sault Ste. Marie; Dr. T. B. Armstrong and Maj. S. J. Robbins, of Toronto; W. H. Wright, Barrie; and Dr. W. A. Elgie, Chatham. The company will be represented in the field by F. H. Skene, with headquarters at Smith; while F. H. Stover will have personal charge of the drilling.

Holdings of Athadome Oils, Ltd., in the Athabaska area cover some 32,000 acres located in Townships 72, 73 and 74, Ranges 23, 24 and 25, west of the fourth. The acreage is on a structural high between Calling Lake on the east and Fawcett Lake on the west and some distance north of the holdings of Crudome Oils, Ltd., which last season started drilling in LSD 16, Section 24-72-25w4. The Crudome test is unofficially reported to have reached 1,000 feet and encountered some indications of oil. Geological reports on the Athadome acreage indicate a potential producing horizon around 1,550 feet, and funds have been placed in escrow to finance three tests to this depth.

Previous drilling in the Athabaska area has been concentrated around Pelican Rapids and near the tar sand outcrops at McMurray. The Dominion government drilled a test in 1894 near Athabaska townsite which was abandoned at 1,771 feet, apparently within 100 feet of the Dakota sand. In 1897 another government test at Pelican Rapids got a strong flow of gas at 800 feet or more; this well burned wide open for 25 years, and was definitely shut in only a few years ago. In 1911 Calhoun Oil Co., headed by H. L. Williams, drilled close to the government well, encountering gas at 625 feet and finishing in the Devonian lime at 2,069 feet. Pelican Oil & Gas Co., which took over the Calhoun company, drilled two wells, the second some 6 miles upstream from the government well. A project was at one time mooted for piping the gas to Edmonton, but the near Viking Field was preferred. In 1913 some shallower wells were drilled near McMurray, and a deeper test, which finished 266 feet in granite at 1,405 feet, got a strong show of black oil. These tests, however, were a long distance east of the Athadome acreage.

Fort Norman Investigation

As a result of a survey made in March by Ronald W. McKinnon, Imperial Oil, Ltd., is now shaping its policy with reference to reopening and further development of the Fort Norman Field on the Mackenzie. McKinnon recently made an airplane flight to Fort Norman, and has since made a comprehensive report on the condition of the wells and equipment and the potential market for the product.

The report states that owing to the fact that No. 1 Discovery was not hooked up to storage tanks, he was unable to make an accurate test; but the flow appeared the same as in 1924 when it ran about 60 bbls. a day. No. 2 Discovery, at which tanks were installed, flowed 179 bbls. in a 24-hour test, and is estimated good for at least 100 bbls. a day on steady production; with a settled production of 150 bbls. for the two wells. The oil is a fine crude, too light in its unrefined state for consumption in Diesel engines; but with a simple distilling process, a gasoline suitable for motor boats and ordinary engines and a residual oil suitable for Diesel and boiler fuel could be produced. The crude is suitable for production of airplane gasoline, but this would require more elaborate equipment, installation of which at Fort Norman would cost more than twice what it would at Edmonton. Gasoline costs between $2 and $3 a gallon in this area, but with cheaper fuel available, it is expected freighting costs will come down, causing a substantial reduction in the cost of supplies.

The report states that in one year Imperial Oil, Ltd., shipped through Waterways for consumption in the Northwest Territories 2,400 bbls. of airplane gasoline, 2,500 bbls. of ordinary motor gasoline and 435 bbls. of kerosene. In addition to the Hudson's Bay steamers there are approximately 100 auxiliary schooners owned and operated by Eskimos in the Arctic. Diesel power boats plying between Vancouver and Herschel Island at present carry sufficient fuel for the return trip, but would probably refuel if oil were available in the north.

Reopening the field is designed to serve primarily an increased demand due to the new mineral development in the Great Bear Lake area. The Fort Norman Field is 350 miles west of the new mining area and on the main waterway to that area. Under existing conditions there is no prospect of transporting Fort Norman production to outside markets but it is thought it can be advantageously utilized in connection with northern mining and trading operations.

Conservation Board Named

Formal appointment by the Alberta government of the conservation board to handle the Turner Valley Field has been announced. The board will include Dr. R. C. Wallace, president of the University of Alberta, who will be chairman; Judge A. A. Carpenter, chairman of the Alberta Public Utilities Commission; and John McLeish, of Ottawa, director of the mines branch of the Dominion Department of Mines. Offices have been secured at Calgary. Frank P. Fisher, of Mount Vernon, Ohio, for some months past technical advisor of the Alberta government, will continue for a period to assist the new board.

The board will have full powers of control and administration in the field and is authorized to reduce the wet gas flow to not more than 200,000,000 feet a day, to prescribe the daily rate of permitted production for each well and to determine what wells may be permitted to produce. The first work of the board will be to make a thorough test of the entire field which is expected to occupy three months. A basis of compensation to interests detrimentally affected by the conservation measures will then be determined, and a permanent policy of unit operation worked out. It is hoped to secure a voluntary pooling agreement; but, failing this, the board will recommend a permanent policy of unit operation to the government, to be dealt with at a special session of the Alberta legislature in December.

The board will recruit its own technical staff which may include experts from United States fields where conditions are similar. The expenses of the board will be financed by a levy on gas and naphtha sold from the area under supervision.

Prices Are Advanced

Field prices in Alberta were advanced from 6 to 20 cents a barrel in a new list posted by Imperial Oil, Ltd., on April 22. Crude naphtha is up from $3.12 to $3.32; discolored naphtha from $2.88 to $3.08; crude oil, 50 degrees up, from $2.65 to $2.80; crude oil, at 45 to 45.9 degrees, from $2.03 to $2.18; and crude oil, 40 to 44.9 degrees, up from $1.50 to $1.56.

North Turner Valley

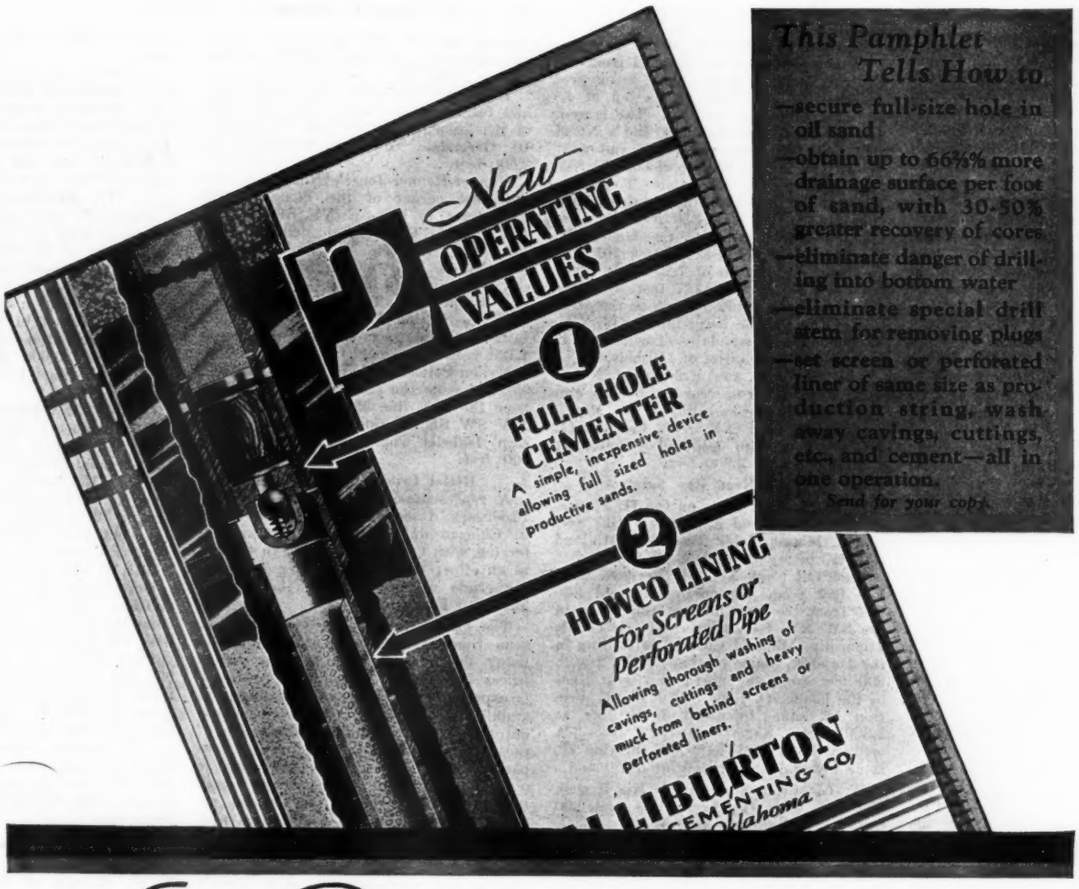
In the North Turner Valley, Model Oils' No. 2, LSD 16, Section 22-20-3w5, taken over some time ago from the Anaconda Oil Co. at 3,575 feet, has finished cleaning out and is reported making new hole below 3,760 feet.

Central Turner Valley

In the Central Turner Valley, McLeod Oil Co.'s No. 1, LSD 16, Section 1-20-3w5, is sidetracking lost tools around 3,725 feet. A second crew has been put to work on McLeod's No. 4, same LSD, which is cleaning out in an effort to restore production, and may be drilled deeper. Canada Southern's No. 3, same LSD, is reported drilling below 4,250 feet.

South Turner Valley

In the South Turner Valley, Canadian Royalties, Ltd., of Calgary, has started deepening Spray Oils' No. 1, LSD 9, Section 5-19-2w5. Field operations are under the supervision of A. D. Wolsey, who has had long experience in foreign fields with both the Anglo-Persian and Royal Dutch-Shell companies. The location is in the same general area as the Mercury and Hylo wells, but a little to the west. The test was carried to about 2,200 feet with 13⅜-inch casing to 2,136 feet; it is planned to continue this size to the Blairmore formation around 2,500 feet. The Home sands, where Hylo Oils' No.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1 got a good light crude production, are looked for around 4,000 feet.

In the same general area, Miracle Oils' No. 3, LSD 11, Section 4-19-2w5, is fishing for drill rods dropped when the old derrick was burned. The hole bottoms at 6,150 feet with a fair show of light crude in the lime. Hylo Oils' No. 1, LSD 12, same section, is recementing in the top of the lime at 5,501 feet.

Tests in the Foothills

On the Fisher Creek structure, Cotton Belt Mines' No. 1, LSD 5, Section 21-21-4w5, has finished running casing and is making new hole below 2,630 feet.

On the Moose Mountain structure, Elbow Oils' No. 1, LSD 11, Section 35-22-5w5, is testing a cement job at 3,342 feet.

Birch Ridge Structure

There is likelihood of some new development being undertaken this season on the Birch Ridge structure, a little north and west of the Moose Mountain area. This structure was first mapped last year by Dr. G. S. Hume of the Geological Survey of Canada. The structure extends from south of Whiskey Creek in Range 4 to north of Fish Creek in Range 5, and is apparently quite different in type from either the Fisher Creek or Two Pine structures. The overthrust fault on the east side of Fisher Creek appears to die out to the north and is replaced by a simple synclinal fold in the cardium member of the Benton shale group. There is a fault on the east side of the Birch Ridge structure along which Blairmore strata are overthrust onto the Benton shales at about the cardium horizon. As the strata close to the fault dip steeply, it is assumed the dip of the fault plane is also steep, a condition not likely to change with depth. The Birch Ridge structure at its north end seems to be a simple anticline plunging northward and exposing cardium sandstone on Elbow River in Section 11-23-5w5. To the south, a thrust fault rather closely follows the axis of the anticline. Doctor Hume says:

Oil City Test

Preparations are under way for resumption of work in the old Oil City Field in southwestern Alberta, in the Waterton Lakes Park area. Alfred Patrick of Calgary will handle the drilling for the Patrick Oil Co. on a contract basis, cable tools being used. The first operation will be the cleaning out of the original discovery well of the Rocky Mountain Development Co. in Section 30-1-30w4. This test, drilled some 30 years ago and which for a short time produced 39 degree crude in commercial quantities, still has the old wooden drill rods in the hole, and it is thought production can be brought back if it is cleaned out. If not, a new test will be drilled.

Border Fields

Operations in the southern Alberta border fields have been held up by the recent severe blizzard which piled up deep drifts and interrupted all communications. No word has yet been received regarding Pareo Oil Co.'s No. 1, LSD 16, Section 34-1-20w4, on the Twin River structure, which at last reports was cleaning out and testing after a second shot in the Madison lime.

On the Montana side, Sheldon-Burden Co. of Calgary has secured contract to complete the William E. Fulton test on the Milk River anticline. Milk River Petroleum Co. has taken over the Fulton test, which was drilled to 2,810 feet with cable tools; and the new contractors are moving over the heavy duty outfit used for the Spring Coulee deep test which was carried to 6,191 feet.

On the Keho Lake structure, Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, has been held up by bad weather, but is expected to commence drilling out cement and sidetracking early next month.

Ontario Drilling

In the Dawn Field, Lambton County, Ontario, Dawn Oil & Gas Co.'s No. 1, E half Lot 25, Concession 9, Sombra Township, has finished a dry hole at 2,125 feet and is pulling casing. The test encountered salt at several horizons, and proved to be low on the structure, being about 3 miles almost due west of the nearest producer in the Dawn gas field. The company will move the outfit to a new location for a second test, early in May.

Michigan Pacific Oil & Gas Co.'s No. 1, Lot 10, Concession 12, Brooke Township, to the north and east of the Dawn Field, is standing at 2,431 feet after drilling some 85 feet into the Big Red formation. It is reported the company is planning to carry the test deeper.

In the new Euphemia Field, in southeastern Lambton, Lambton Oil & Gas Co.'s No. 1, SW corner, Lot 28, Concession 9, Euphemia Township, which last week indicated a flush production of about 150 bbls., has been placed on the pump and is making a steady production of 40 bbls. a day from the upper lime at 308 feet. Lambton Oil & Gas Co.'s No. 2 is drilling in NW, Lot 27, Concession 9, about 530 feet east and 100 feet south of No. 1.

Kent County Tests

In Kent County, Union Natural Gas Co.'s No. 20 D'Clute has been located in Lot 21, Concession 10, Raleigh Township. The location is about 4 miles north of the nearest producer in the D'Clute Field and about 2 miles south of the Olga Oil & Gas Co. producers. This is the first test of the Union company's 1932 development.

In Tilbury East Township, Ralph Dawson's No. 3 has been located in the south quarter of Lot 3, Concession 15, about 800 feet north of No. 2 gasser.

Middlesex Prospect

It is reported that E. P. Rowe is locating a wildcat test for Acme Gas & Oil Co. of Toronto in the Big Bend area in Mosa Township, Middlesex County, close to the River Thames. The location is east of the Bothwell Field and somewhat south of the Mosa shallow pool, developed some years ago near Glencoe. The area is one previously untested, though it is claimed there are good indications of possible shallow production.

A recent report of the Acme Gas & Oil Co. shows net income of $25,548 for the quarter ending March 31, with $93,303 for the year 1931. In this period the company has completed six gas wells in the Tillsonburg area in Ontario, production of which is being taken by the Southern Ontario Gas Co.; while it has a two-thirds interest in a producing oil well completed in East Texas and No. 2 Pinkston has been drilled in with apparently a high potential production.

Pelee Island Tests

It is reported that Pelee Oil & Gas Co. of Leamington, headed by Ed Winters, has moved a drilling outfit from Leamington to Pelee Island in Lake Erie, where from two to six wells will be put down this season. The company has leased a large acreage about 2½ miles from the West Side dock and half a mile from the South Bay shore, the acreage including the John Lucas farm. Drilling operations will be handled by Joe Hussey of Kingsville and Albert Strait, who has had experience in Burma, Oklahoma and South America. If the initial test gets production, efforts will be made to clean out and recondition some of the old wells, which after 25 years are still flowing a little oil, the production being used locally or allowed to seep into the ground. If gas is struck in commercial quantities, the company plans a distributing system to supply the island. At present there is one producing gas well on the Charles Roper farm, the production being used to supply Mr. Roper and a few neighbors.

The field was first developed by the New York-Lake Erie Oil & Gas Co., headed by the late Charles L. Meyer, a Belgian geologist. Associated with Mr. Winter in the Pelee Island company are B. C. Watson of Leamington; Orville Rolfson of Windsor and Maj. Ralph Sheppard.

Red Coulee Field

On the Alberta end of the international Red Coulee structure, Devonshire Oils' No. 1, LSD 3, Section 10-1-16w4, is reported cleaning out below 1,400 feet. Work has been hampered by bad weather conditions in southern Alberta.

On the Montana side, Askalta Oils' No. 3 Farbo is reported starting work, on proven acreage near the two Askalta producers.

Coutts Pipe Line Co. is reported to have completed its pipe line from the Montana end of the field and is reported running crude to the refineries at Coutts.

Alberta Production Figures

Official figures issued by R. G. Reid, minister of mines for Alberta, place the wastage of gas from the Turner Valley Field in March at a total of 11,200,000,000 feet. The estimated total gas withdrawal from the field was 12,500,000,000 feet of which 1,300,000,000 feet was put to use.

Crude production from Alberta totaled 86,711 bbls. for the month. Of this total 80,675 bbls. of naphtha and 2,102 bbls. of light crude came from Turner Valley. The Red Coulee Field produced 3,607 bbls. of light crude and the Wainwright Field 327 bbls. of heavy crude.

In the Turner Valley, about 3.45 per cent of the production was lost through evaporation. Sales of naphtha to other purchasers than the three refineries totaled 19,369 bbls. for the month. Stocks of oil in Turner Valley decreased by about 1,500 bbls., the total in storage at the end of March being 47,572 bbls.

It is estimated that an average of 156,000 feet of gas is now required to produce 1 bbl. of naphtha; as against 146,000 feet in February and an average of 116,000 feet in 1931.

Three Good Wells in Michigan Field

One Had Initial of 3,000 Bbls., Another 1,200 Bbls. Several Wells Nearing Pay Sand. Movement for Proration

By George A. Whitney

MOUNT PLEASANT, Mich., May 2.—Four completions were reported from the Central Michigan Field, three being producers with an initial production of 4,350 bbls., and one dry hole. The largest was Walter L. McClanahan, Inc.'s No. 3 well, 990 feet from the south and west line of the Henry W. Morrison, SE SW SE, Section 10, Greendale Township, Midland County, with an initial of 3,000 bbls., and No. 2 well, 330 feet from the north and west lines of the Henry W. Morrison, NW SW SE, Section 10, with an initial production of 1,200 bbls. Pure Oil Co.'s No. 1 well, 727 feet from the south line and 1,152 feet from the west line of the Pringle heirs farm, SW NW, Section 14, Greendale Township, is credited with an initial of 150 bbls.

The dry hole was Fred Sias' No. 1 well, 326 feet from the north line and 113 feet from the east line of the Merrifield-Nelson, NE NE SW, Section 17, Jerome Township, Midland County, at a total depth of 3,900 feet.

Wells Near Pay Sand

T. K. Buzzard's test on the H. Simms, in the NE SE and E half NW SE, Section 4, Mount Haley Township, Midland County, is reported at 3,300 feet.

Pure Oil Co.'s No. 3-B Bernard well, 990 feet from the north line and 330 feet from the west line of the lease, in the SW NW SW, Section 10, Greendale Township, Midland County, is drilling in the Dundee. Same company's No. 2 well, 990 feet from the north and west lines of the Emma O. Reed, SE NW SE, Section 10, same township, is drilling at 3,300 feet. Same company's No. 3-A well in the NW W half NW, Section 16, same township, is drilling at 3,450 feet.

W. L. McClanahan, Inc.'s No. 5 well, 990 feet from the north line and 330 feet from the east line of the A. G. Struble, SE NE SW, Section 10, Greendale Township, Midland County, is drilling at 2,850 feet.

Talbot Oil Co.'s No. 2-C State well, 330 feet from the north and west lines of the lease in the NW SE SE, Section 10, Greendale Township, is drilling at 2,500 feet.

Hanner-Renner-Jones' No. 1 in the southeast corner of the Peninsula Oil Co.'s lease in the SE NE SE, Section 4, Greendale Township, is drilling at 2,700 feet.

Frank L. Maire's test, 650 feet from the north line and 330 feet from the east line of the Earl T. Wilson estate, NE SE NE, Section 12, Gilmore Township, Isabella County, has resumed drilling at 4,129 feet.

Mellon-Pollock Oil Co.'s No. 2 well, 990 feet from the south line and 330 feet from the west line of the Lewis Thayer, NW SW SE, Section 22, Vernon Township, Isabella County, is drilling at 2,500 feet.

Better Crude Prices Wanted

A representative of the Oil and Gas Producers Association of Michigan was in Chicago during the past week, conferring with officials of the Pure Oil Co. in an effort to obtain a higher quotation for crude oil produced in the Central Michigan Field.

The association has been working for some time on a program aimed at stabilizing development and bringing better prices for crude. A policy of proration is expected to be the dominant factor in stabilizing the price. It has been pointed out that tapping the flush production of the far east pool and producing it to capacity at a 55-cent per barrel price is a "criminal waste." Independent operators here and the Pure Oil Co. are reported to be anxious to work out a program to conserve the oil and stabilize the price.

A 90-day proration program will go far in stabilizing the market here, it was said. Working co-operatively through the Oil and Gas Producers Association a spirit of optimism prevailed here this week among oil men and definite results are expected from the Chicago conference.

Michigan Pickups

Walter L. McClanhan, Inc., secured a permit to drill No. 1 well, in the southeast corner of the Wilhelm, SE SE SW, Section 12, Greendale Township, Midland County, also one for a test on the Caywood farm, Section 36, same township.

George Talbot of the Talbot Oil Co., has constructed a storage tank with a capacity of 85,000 bbls., on the Adams farm, in the East Field, and is now storing his crude.

G-Lee-P. Development Co. is spudding in the northeast corner of the Carl W. Schaeffer, E half W half SW, Section 12, Greendale Township, Midland County.

W. L. McClanahan, Inc., started spudding No. 1 Dan Johnson, NW SE SE, Section 12, Greendale Township. Braden-Saunders Co. started drilling No. 1 in southwest corner of the Kate Stapleton, NW NW NE, Section 13, same township.

Gordon Oil Co. is drilling No. B-4, 990 feet from the north line and 330 feet from the west line of the N. J. Skinner, SW NE NE, Section 16, same township.

Pure Oil Co. is drilling No. 1 well, 990 feet from the north line and 330 feet from the west line of the John J. Bolan farm, W half W half NE, Section 16, Greendale Township, Midland County. W. L. McClanahan, Inc., is drilling No. 6 well, 490 feet from the south line and 330 feet from the east line of the A. G. Struble, NE SE SW, Section 10, same township.

Production in Kettleman Middle Dome

Standard Well Flows 1,245 Bbls. of 53.8 Gravity Oil and 34,000,000 Feet of Gas. Plan for Unit Development Under Way

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Apr. 30.—The Standard Oil Co. definitely proved the existence of commercial production in the Middle Dome of Kettleman Hills during the week when its No. 6-29V was brought in flowing 1,245 bbls. of clean 53.8 gravity oil and 34,000,000 feet of gas per day. This new well, an offset to No. 1 Burbank of the Petroleum Securities, was bottomed at 7,885 feet but plugged back to 7,825 feet. It has an 8⅝-inch water string landed and cemented at 7,513 feet and is producing from the upper 312 feet of the Temblor. The zone from which the Standard's new well is producing in the Middle Dome is comparable with the Elliott high pressure zone in the North Dome, both horizons being characterized by the production of exceptionally high gravity oil and a large volume of gas. It has not yet been definitely determined whether this well will be allowed to produce in view of its limited penetration or whether it will be carried down as an exploratory well. If the Standard decides to permit it to remain on production it will be necessary to construct an extension of existing pipe line facilities as the lease tankage is relatively limited. When brought in a few days ago, tentative plans called for the conducting of a preliminary production test, at the conclusion of which drilling was to be resumed. It is not at all improbable that the well will be shut in pending the outcome of the movement to unify production and development activities in the Middle Dome.

Second Field

Completion of the Standard's No. 6-29-V adds another new oil field to California's list of productive areas and marks the discovery of a second oil field in Kings County. The completion of this well did not come as any surprise as it had been anticipated in view of the fact that No. 1 Burbank of the Petroleum Securities revealed the existence of a substantial accumulation during the latter part of 1931. A defective water shutoff or a hole in the water string prevented the successful completion of No. 1 Burbank and this project is still held up with a hole full of junk. It was drilled to 9,332 feet and the company is milling at 5,178 feet. This fishing job has probably cost at least $150,000. It appears to be a hopeless task and there does not seem to be very much chance of ever getting this well back on production. The Middle Dome of the Kettleman Hills anticline is substantially smaller than the North Dome and, while opinions differ as to the probable amount of productive acreage, it is thought the field will be limited to approximately 5,000 acres.

The Kettleman Hills are a continuation to the south of the Coalinga anticline and the structure consists of three anticlines lying in echelon and generally referred to as the North Dome, Middle Dome and South Dome. Commercial production has been found in both the North and Middle Domes, but development work up to the present time has been negative as far as the South Dome is concerned. The Ohio Oil Co.'s test in the South Dome came in flowing approximately 50,000 bbls. of hot salt water in 1930. This unfavorable development has retarded further work in the South Dome although the Ohio's project looked rather favorable before the production test was made. It is probable additional drilling will ultimately be undertaken in the South Dome. The South Dome, unlike the North ond Middle Domes, does not have perfect closure and consequently is not as favorable from a geological standpoint. The southern end of this dome is open and many are of the opinion that the South Dome of the Kettleman Hills anticline is in reality the northern end of the Lost Hills structure lying to the south and located along the same general line of folding.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

Intercoastal-	Apr. 16, 1932 Total this week	Apr. 16, 1932 Daily average	Apr. 9, 1932 Total last week	Apr. 9, 1932 Daily average	This year to date	Same time last year
Diesel and gas oil	.....	.....	.....	.....	116,890	798,729
Gasoline	.....	.....	.....	.....	1,688,623	4,547,221
Kerosene	.....	.....	.....	.....	.....	41,512
Foreign exports—						
Crude oil	190,949	27,278	267,861	38,263	2,772,942	2,067,358
Fuel oil	335,077	47,868	27,651	3,950	3,011,563	4,510,096
Diesel and gas oil	126,871	18,124	7,717	1,102	711,972	1,117,270
Gasoline	89,890	12,841	228,082	32,583	2,869,349	3,172,441
Kerosene	.....	.....	5,233	748	724,071	553,776
Lubricants	.....	.....	.....	.....	.....	18,978
Naphtha distillates	.....	.....	.....	.....	41,175	.....
Coastwise-domestic—						
Crude oil	113,086	16,155	113,751	16,250	4,326,050	6,181,933
Fuel oil	243,159	34,737	252,391	36,056	4,407,396	4,394,014
Diesel and gas oil	.....	.....	20,564	2,938	487,765	504,523
Gasoline	474,924	67,846	73,760	10,537	4,237,091	3,712,453
Kerosene	.....	.....	.....	.....	46,358	119,132
Naphtha distillates	.....	.....	.....	.....	.....	4,952

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	.....	.....	.....	.....	70,995	.....
Gasoline	67,266	9,609	.....	.....	213,707	187,584
Lubricants	7,975	1,139	.....	.....	15,824	14,015
Foreign exports—						
Crude oil	.....	.....	72,319	10,331	491,284	6,010
Fuel oil	73,868	10,553	5,708	815	521,659	276,278
Diesel and gas oil	56,125	8,018	.....	.....	310,056	193,548
Gasoline	165,878	23,697	103,327	14,761	1,165,268	1,075,853
Kerosene	20,181	2,883	19,321	2,760	314,453	285,863
Lubricants	.....	.....	.....	.....	20,884	.....
Coastwise-domestic—						
Fuel oil	68,102	9,729	.....	.....	762,761	1,290,162
Diesel and gas oil	.....	.....	.....	.....	176,747	88,756
Gasoline	41,880	5,983	80,888	11,555	934,570	873,626
Kerosene	3,719	531	7,140	1,020	29,969	83,409

To Unify Production

The development of commercial production by the Standard Oil Co. has revived the plan to unify production and development activities in the Middle Dome and, while very little progress has been made due to the fact that it was a little premature, the proposal is now a real live subject. A special committee, consisting of William Berg, chairman; Roy Collom, Roy Ferguson, Floyd Bryant, Rolph McCollom and J. R. Pemberton, was appointed over a year ago to work out tentative plans for unit development in the Middle Dome. This committee, due to changes in the personnel of several of the companies involved, will be reorganized within a few days and work resumed on the original unit plan. Due to a ruling of the Department of Interior, no further drilling can be undertaken on government acreage in the Middle Dome until a definite plan of unification has been worked out. It is likely the unit plan for the Middle Dome will be similar to that in effect in the North Dome. The Standard, owning approximately 50 per cent of the potentially productive acreage in the Middle Dome, will probably operate as an independent unit rather than as a component part of the Middle Dome unit association. This is in keeping with the policy adopted in the North Dome where it was thought best to operate as a separate unit in order to prevent any entangling alliances, especially in view of the fact that the Standard would control a preponderance of the aggregate acreage involved. In addition to the Standard and Petroleum Securities, the Bolsa Chica Oil Co., Pacific Western and Associated have potentially productive acreage in the Middle Dome.

The Kettleman North Dome Association finished an excellent well in the North Dome of Kettleman Hills this week when No. 81 in Section 2-22-17 was brought in flowing 7,640 bbls. of clean 36 gravity oil and 6,200,000 feet of gas per day from the deep Temblor zone at 8,601 feet. Production of this well built up to 9,450 bbls. subsequent to completion but is now beaned back to 2,345 bbls. The Association's new well is a direct offset to Associated Oil Co.'s No. 2 Whepley and Shell's No. 1 Dixon. Three locations east of the North Dome, Association's new well and just outside the red production line, the North American's No. 1 Signal, is now 9,222 feet with considerable gas and oil showing on the ditch.

Superior Judge Edmonds issued a preliminary decree late this week ordering the shutting in of nine wells in the Dominguez Field until May 10 by which time the suit to enjoin Dominguez operators from wasting gas will have been completed. The wells ordered taken off production are No. 16 Callender and Nos. 4, 5 and 9 on the Hellman lease of the Union Oil Co., and Nos. 4, 14, 25, 26 and 36 on the Reyes lease of the Shell. This order was issued at the behest of the directors of natural resources over the objections of counsel for the defendants. The shutting in of these nine wells has reduced crude oil production of the Dominguez Field 1,000 bbls. per day and curtailed gas production to the extent of 5,000,000 feet daily.

State Production Down

Crude oil production in California, reflecting curtailment work by major companies in the Coyote, Richfield, Elk Hills and Montebello Fields, showed a tapering off during the past week with the result that state production showed a little decline. The West Coyote Field is down about 1,500 bbls. per day and is consequently producing below its daily allowable. During the preceding week the West Coyote Field exceeded its daily allotment by approximately 2,000 bbls. per day. This temporary excess was due to the completion of two new deep zone wells by the Standard Oil Co., which showed an aggregate initial daily production of 2,992 bbls. The Standard is drilling three additional wells in the West Coyote Field and two of them, No. 50 Emery and No. 109 Murphy Coyote, should be tanking oil within three weeks. Approximately 75 per cent of the producing wells in the West Coyote Field have been shut in, many of them since 1929, and it appears probable the Standard will rely almost exclusively on the flush deeper zones for current production and utilize the upper zones for gas storage and injection purposes.

Fruitvale

Two new wells were chalked up in the Fruitvale Field of Kern County during the past week and another, the Western Gulf's No. 11-B, should be on production within 48 hours. The two new wells completed in the Fruitvale Field were the Mohawk Petroleum Co.'s No. 9 and the Sea Hawk Petroleum Co.'s No. 2-A Fairhaven. The former, bottomed at 4,070 feet and finished with an 8⅝-inch water string landed and cemented at 3,820 feet, was brought in under a natural flow doing 340 bbls. of 21.4 gravity oil per day, while the latter, finished at 3,792 feet and completed with an 8⅝-inch water string landed and cemented at 3,540 feet, was completed doing 430 bbls. of 22.2 gravity oil per day. Drilling operations have slowed down somewhat in the Fruitvale Field during the past few weeks, although additional wells are expected to be started from time to time during the next several months. The Mohawk spudded in a new well early in the week and the Sea Hawk Petroleum has material on ground for No. 2-B Fairhaven. The Western Gulf has not yet spudded in No. 2 Price Stewart, rigged up several weeks ago, but will probably begin making hole within 10 days. The

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status—
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	9- 2-15	7,414	suspended
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	6,238	suspended
Co-operative Dev. Co., No. 1 Del Rey, Los Angeles Co.	26- 2-15	318	suspended
Lawndale Pioneers, Inc., No. 1 Peck, Los Angeles Co.	20- 3-14	6,378	suspended
Barcus, W. I., No. 1 Watson, Los Angeles Co.	28- 4-13	rig	rigged up
Baldwin Oil Co., No. 9 Inglewood, Los Angeles Co.	7- 2-14	2,560	redrilling
Baldwin Hills Synd., No. 1 Inglewood, Los Angeles Co.	17- 2-14	4,090	suspended
Rucker & Croul, No. 2 Puente, Los Angeles Co.	27- 2-10	2,200	suspended
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	30- 2- 9	2,660	hd. sd. drilling
Jones, W. L., No. 1 Bell, Los Angeles Co.	31- 2-12	1,593	cleaning out
Weist Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	4,902	suspended
Blinn & Gray, No. 1 Montebello, Los Angeles Co.	6- 2-11	5,060	suspended
Wardell & Menichini, No. 1 Montebello, Los Angeles Co.	7- 2-11	102	sd. drilling
Yellowstone Oil Co., No. 1 Alhambra, Los Angeles Co.	24- 1-13	3,919	suspended
Rucker, L. W., No. 1 Calabasas, Los Angeles Co.	26- 1-17	1,004	fishing
Caballero Estates, No. 1 Calabasas, Los Angeles Co.	28- 1-16	1,515	gr. sd. drilling
Marble, Willard, No. 1 Chatsworth, Los Angeles Co.	6- 2-16	1,395	suspended
Ajax Pet., No. 1 Newport, Orange Co.	21- 6-10	7,259	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	1,970	to deepen
Orangethorpe Pet., No. 1 Brea, Orange Co.	32- 3-10	rig	suspended
Beck, Alfred, No. 1 Corona, Riverside Co.	8- 4- 6	1,110	suspended
Spindletop Oil Co., No. 1 Salton Sea, Riverside Co.	25- 7-10	3,590	suspended
Duncan, N. L., No. 1 Sagebrush, Riverside Co.	8- 4- 6	1,157	suspended
Colan Dev. Co., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,392	sidetracking
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-17-15	664	sd. sh. drilling
Woods, D. H., No. 1 Salton Sea, Imperial Co.	7-11-16	757	sd. sh. drilling
Borderland Oil Co., No. 2 Encinitas, San Diego Co.	12-13- 4	2,677	redrilling
South Bay Oil Co., No. 1 Border, San Diego Co.	31-18- 2	1,243	suspended
Itasca Pet. Co., No. 1 Mesa, San Diego Co.	33-18- 1	1,700	redrilling
Oklahoma Oil Corp., No. 1 Palms, San Diego Co.	25-11- 8	1,888	suspended
Shannon, G. H., No. 1 Kearney, San Diego Co.	14-15- 3	446	suspended

Bankline Oil Co., which is held up with a fishing job in No. 1 Fruitvale at 4,044 feet, is rigging up rotary equipment in No. 2-B and an early spud is anticipated.

Lost Hills-Belridge

The Belridge Oil Co. recovered the fish which has been holding up progress in its No. 64-27, a deep test in the North Belridge Field of Kern County, and the hole is being reamed preparatory to landing a string of 8⅝-inch casing. This well, an extremely important project, is bottomed in the Kreyenhagen at 8,062 feet. This well will bear watching because if the Belridge Oil Co. succeeds in developing substantial production it may add another billion barrels to California's future reserve of crude oil. This additional reserve will not necessarily come from any new deep zone in the North Belridge Field exclusively, as the real significance to any discovery made in this field would pertain only as it might affect the North and Middle Domes of Kettleman Hills and in the Lost Hills and other producing fields along the western edge of the San Joaquin Basin. A little oil was found in the Kreyenhagen formation by the Standard Oil Co. in Devil's Den area last year, but this could not lead to any definite conclusions as to the probability of commercial production in the Kreyenhagen at Kettleman Hills as structural conditions in the former area are not especially advantageous for the accumulation of oil. It is probable, however, that production will ultimately be developed in the Kreyenhagen at Kettleman Hills if this formation is found productive in the Lost Hills-Belridge area. The overlying Temblor at North Belridge and in the North and Middle Domes at Kettleman Hills is at present producing. Because of the high cost of drilling there has been no deep exploration work undertaken in the Kettleman Hills Field below the present productive Ochsner zone.

Dominguez

There were no completions listed in the Dominguez Field of Los Angeles Basin and it will probably be another 15 days before any additional new wells are finished. The Union should complete three wells in the third Callender zone between now and May 15 and the Associated will probably add another along about the same time. Jim O'Donnell is abandoning his No. 2 Dominguez as a duster at 4,905 feet due to the unfavorable outlook at this point. This well, which was drilled on property originally held by the Richfield Oil Co., failed to encounter the third Callender zone now undergoing development. The Republic Petroleum's No. 1 Childs, being drilled on property quitclaimed several months ago by the Shell Oil Co., is not yet deep enough to pick up either the first, second or third Callender zones, but should reach the depth of the first zone during the next 10 days.

Playa Del Rey

The Playa Del Rey Field of Los Angeles Basin, due to the fact that the Union and Ohio are refraining from new development, will probably continue showing a smaller production during the next several months. If these two companies decided to develop the undrilled locations which they have available, field production would probably be increased about 5,000 bbls. per day. The Ohio is not doing any development work of any kind and the Union is running only one string of tools. This well should be completed within three weeks and it should be good for approximately 500 bbls. per day. There is very little work of any kind being done in the Playa Del Rey Field, either new drilling or reconditioning work. There were practically no developments of consequence in the Long Beach Field, although preparations are being made to start four new wells. There are 19 reconditioning and redrilling jobs under way throughout the field, but this work is not expected to have any appreciable effect on field production.

The Wilshire Oil Co. has started rig construction for two new wells in the Potrero Field of Los Angeles Basin, and both should begin making hole within three weeks. All three of the Wilshire's producing wells in the Potrero Field are off production. No. 1 Neace is being cleaned out preparatory to being redrilled and No. 1 Potrero is being cleaned out preparatory to being returned to production. The latter project, flowing 250 bbls. per day from 4,444 feet, was effectively mudded off by rotary drilling mud from No. 2 Potrero which suddenly began showing in the production of No. 1 Potrero and ultimately mudded off production. The Wilshire's two new wells, which are being started in conformity with lease requirements, are Nos. 3 and 4 on the Potrero Country Club property, which at one time was held by the Associated Oil Co. The failure of J. O. Smith to develop commercial production in his No. 9 at Lawndale has resulted in the suspension of work on two projects scheduled for early work.

The Standard Oil Co. is rigging up rotary equipment for No. 69 on Los Angeles Investment Lease No. 1 in the Inglewood Field of Los Angeles Basin and the bit in this hole should be started downward within a few days. The Allison Syndicate failed to secure a natural flow in No. 1 Moynier, a deep test located around the edge of the Inglewood Field, and is attempting to complete this 6,110-foot project as a pumping well. No. 1 Moynier can be pumped for a few hours at the rate of 150 bbls. per day but soon pumps off. The Baldwin Hills Syndicate has suspended drilling operations on its Inglewood outpost at 4,090 feet, with the result that No. 9 Brownmoor of the Baldwin Oil Co., Ltd., is the only outpost being drilled around the edge of the Inglewood structure. Two new wells are being started in the Rosecrans Field and, since rig construction is already under way, drilling should be started within 10 days. These two new projects are No. 1 Amestoy of the Independent Refiners & Marketers Co. and No. 1 Rosecrans of J. J. Stephens and associates. The St. Helens Petroleum has a wet job on its hands with No. 1 Walsh, redrilled and deepened to 5,868 feet and subsequently plugged back to 5,560 feet. The inability to develop commercial production at this depth will probably result in an abandonment as the small diameter of the hole will prevent the well from being deepened much further.

Elwood

Three new wells are being started in the Elwood Field of Santa Barbara County, despite the drilling moratorium and the gentlemen's agreement to refrain from deep zone exploitation until a later date. The three new wells being started are ostensibly being drilled to the Vaqueros formation and because of lease requirements. It is reported that Caroline Spalding insisted on the drilling of another well on the Blue Goose lease by the Pacific Western Oil Co. The drilling of this well made it obligatory for the Pacific Western to start an offset on State tideland permit No. 92 and this in turn forced the Barnsdall and Rio Grande to drill a new well on State tideland permit No. 88. These three wells, two of which should begin making hole within a few days, should be finished in the latter part of May.

Ventura Avenue

The Associated has spudded in two new wells in the Ventura Avenue Field due more to the desire to retain its drilling crews than because of any wish to increase production. The Associated's No. 83 Lloyd, the deepest well to be drilled in the Ventura Avenue Field, now down 9,075 feet, should be given an early production test. This well is rotating in the deep 57 zone, which was found in No. 57 Lloyd late last year. The 57 zone has not been produced up to the present and No. 83 Lloyd is being drilled for exploratory purposes only. The General Petroleum took No. 1 Tomson off production a few weeks and consequently still has one crew busy in the Rincon Field where it recently recompleted No. 2 Needham. The Bolsa Chica Oil Co. has decided to drill a second Vaqueros test on the Coal Oil Point structure, a few miles east of the Elwood Field in Santa Barbara County, and actual drilling should be started some time during the next few weeks.

NATIONAL OIL SCOUTS' PROGRAM AT HOUSTON

HOUSTON, Tex., May 2.—Plans are practically complete for the National Oil Scouts Association convention which will be held in Houston on May 15 to 17, inclusive. The meeting will be opened Sunday, May 15, at 11 a.m. by an address of welcome by Mayor Monteith and a reply by John Langston of the Sun Oil Co., president of the association. A business session will convene at 2 p.m.

Monday morning there will be a trip to Sugarland oil field and at 9 a.m. a talk on repressuring methods by W. W. Scott of the Humble Oil & Refining Co., followed by a trip through the repressuring plant. At noon the party will arrive at the Texas Gulf Sulphur Co. clubhouse, New Gulf, and an address will be delivered by A. G. Wolf on sulphur mining on the Gulf Coast, followed by an inspection trip through the plant.

On Tuesday morning a business session and election of officers will be held. At least two company executives will address the association. These have not yet been named.

HOWARD KIDDER DIES

HOUSTON, Tex., May 2.—Howard J. Kidder, lubrication engineer for the Pierce Oil Co. at Mexico City, died in Houston hospital Friday, April 29. Mr. Kidder had been with the Pierce company for 35 years.

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status—
Standard, No. 1 Santa Rosa Island, Santa Barbara Co.	.....	....	building roads
Barnsdall, No. 1 Los Alamos, Santa Barbara Co.	31- 8-33	3,801	br. sh. drilling
Western Gulf, No. 1 Santa Maria, Santa Barbara Co.	5- 9-33	8,895	br. sh. drilling
Wilson, N. S., No. 1 Los Alamos, Santa Barbara Co.	2- 7-35	4,291	br. sh. drilling
Johnson, G. W., No. 1-A Goleta, Santa Barbara Co.	19- 4-27	5,554	suspended
Equity Oil Co., No. 1 Coal Oil Point, Santa Barbara Co.	24- 4-20	2,103	resume work
Cuyama Oil Co., No. 1 Cuyama, Santa Barbara Co.	19-10-27	rig	rigging up
Sovereign Oil Co., No. 1 Guadalupe, Santa Barbara Co.	20-10-35	5,500	suspended
Pacific Western, No. 1 Gibralter, Santa Barbara Co.	14- 5-27	2,345	suspended
The Texas Co., No. 1 Carpinteria, Santa Barbara Co.	33- 4-25	101	sd. drilling
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,080	suspended
Woodrow Pet., No. 1 Miguelito, Ventura Co.	4- 3-24	988	sd. sh. drilling
Bell, H. H., No. 1 South Mountain, Ventura Co.	22- 3-21	2,484	suspended
Magu Synd., No. 1 Oxnard, Ventura Co.	17- 1-25	5,812	fishing
American Oil Co., No. 1 Conejo, Ventura Co.	33- 2-20	1,590	cleaning out
Graham & Loftus, No. 1 Goose Lake, Kern Co.	20-27-22	6,619	prod. test
General Pet., No. 1 Buttonwillow, Kern Co.	6-28-23	3,094	fishing
Wilshire Oil Co., No. 1-A Buttonwillow, Kern Co.	7-29-24	7,000	cleaning out
Milham Expl. Co., No. 13 Buttonwillow, Kern Co.	9-28-23	1,080	sd. sh. drilling
Purman, T. H., No. 1 McKittrick, Kern Co.	22-29-21	3,693	suspended
Welport Oil Co., No. 8 McKittrick, Kern Co.	26-29-21	1,298	recemented
Federal Drlg. Co., No. 1 Buena Vista, Kern Co.	20-31-24	5,380	suspended
General Pet., No. 1 Belridge, Kern Co.	30-28-21	8,260	suspended
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,222	suspended
Rio Grande, No. 1 Shale, Kern Co.	7-27-19	....	grading
Rio Cal Pet., No. 1 Shale, Kern Co.	2-27-18	2,356	suspended
Fullerton Oil Co., No. 5 Semitropic, Kern Co.	9-28-24	2,194	sd. sh. drilling
Cumberland Oil Co., No. 2 Devil's Den, Kern Co.	17-26-18	3,225	suspended
Taylor, R. W., No. 1 Devil's Den, Kern Co	29-25-19	rig	suspended
Totem Oil Co., No. 1 Devil's Den, Kern Co.	29-25-19	rig	suspended
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19	106	suspended
Regina Oil Corp., No. 1 Mojave, Kern Co.	26-10-14	2,790	sd. sh. drilling
Meridian Oil Co., No. 1 Mojave, Kern Co.	11- 9-15	4,000	suspended
Harding, J. B., No. 1 Mojave, Kern Co.	5-10-10	1,030	redrilling
Barnsdall Oil Co., No. 1 Tejon, Kern Co.	15-11-20	5,801	sd. sh. drilling
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	6,025	suspended
Descanso Oil Co., No. 1 Tejon, Kern Co.	31-11-19	2,749	suspended
Associated, No. 1 Jacalitos, Fresno Co.	22-21-15	6,197	suspended
Kingsburg Expl. Co., No. 1 Kingsburg, Fresno Co.	30-16-23	2,430	suspended
Kent & McDonald, No. 1 Carrizo Plains, S. Luis Obispo Co.	3-32-22	2,693	br. sh. drilling
Emerich Oil Co., No. 1 Carrizo Plains, San Luis Obispo Co.	22-32-22	713	sd. sh. drilling
Trav-El Oil Co., No. 1 Carriso Plains, San Luis Obispo Co.	7-32-22	2,450	cleaning out
Indian Dome Oil Co., No. 1 Edna, San Luis Obispo Co.	26-31-12	3,352	suspended
Martin, J. D., No. 1 Edna, San Luis Obispo Co.	5-31-13	3,070	suspended
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-27-11	4,191	suspended
Emerich Oil Co., No. 1 Atascadero, San Luis Obispo Co.	13-28-12	2,340	sd. sh. drilling
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	1-29-12	1,650	suspended
Pacific Inland, well No. 1, Monterey Co.	19-23-15	2,339	redrilling
Brown, W. F., No. 1 Parkfield, Monterey Co.	15-23-14	1,051	suspended
Guess, E. B., No. 1 Corcoran, Kings Co.	7-21-21	6,197	suspended
Owens Bros., No. 1 Dudley Ridge, Kings Co.	32-22-20	rig	rigged up
Brown, A. M., No. 1 Dudley Ridge, Kings Co.	18-22-19	218	sd. drilling
Kettleman Natural Gas Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,100	suspended
Irma Investment Co., No. 2 Dudley Ridge, Kings Co.	7-23-20	1,224	suspended
Eagle Oil Co., No. 1 Dudley Ridge, Kings Co.	15-23-20	1,125	gas, shut in
Eagle Oil Co., No. 2 Dudley Ridge, Kings Co.	15-23-20	301	gr. sd. drilling
Valley Expl. Co., No. 1 Dudley Ridge, Kings Co.	12-23-19	1,302	suspended
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17	5,894	suspended
Seymour, L. W., No. 1 Avenal, Kings Co.	10-23-16	1,148	suspended
Magee & Stone, No. 1 Alpaugh, Kings Co.	34-24-22	3,660	suspended
Guess, E. B., No. 3 Dudley Ridge, Kings Co.	12-23-22	1,550	sd. sh. drilling
Ducor Pet. Co., No. 1 Ducor, Tulare Co.	14-24-27	2,200	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	suspended
Gravity Expl. Co., No. 1 Alpaugh, Tulare Co.	11-24-23	2,207	bl. sh. drilling
Ellis & Sanford, No. 1 Tulare Lake, Tulare Co.	20-24-23	1,920	suspended
Twin State Oil Co., No. 1 Point Arena, Mendocino Co.	14-12-17	7,694	suspended
Napa Oil Co., No. 1 Griffith, Napa Co.	7- 8- 3	2,848	cleaning out
Orinda Pet., well No. 1, Contra Costa Co.	32- 1- 3	2,120	suspended
Colusa Oil Co., No. 1 Bush, Colusa Co.	31-15- 4	1,040	suspended
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	3- 2-10	4,750	suspended
Hilderbrandt, R., No. 1 Crows Landing, Stanislaus Co.	36- 6- 7	1,130	suspended
Rushing Oil Co., No. 1 Waterford, Stanislaus Co.	20- 3-13	2,400	sd. sh. drilling
Orland Oil Synd., No. 1 Orland, Tehama Co.	31-23- 3	3,040	suspended
Pacific Northern Oil Co., No. 1 Guinda, Yolo County	23-12- 3	2,192	cleaning out
Easton & Monell, No. 1 Colma, San Mateo Co.	25- 3- 6	3,118	sd. sh. drilling

A Little Jumping Goat Gave Its Name to

TAXICAB

Taxicab is an abbreviation of *taximeter-cabriolet*—a vehicle carrying an instrument for automatically registering the fare. The name *cabriolet* is the diminutive of the French *cabrioler*, meaning "a leap" like that of a goat, and was applied to this type of carriage because of its light, bounding motion. *Cabriole* came from the Italian *capriola* meaning "a somersault," from Latin *capra* "a he-goat," *capra* "a she-goat." There are thousands of such stories about the origins of English words in

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See Improvement in the Old Lima Field

Summer Expected to Have Increase in Drilling Operations There. Stark County Busiest in Central Ohio. Deep Kentucky Duster

By George A. Whitney
Staff Correspondent, Central West Fields

FINDLAY, Ohio, May 2. — Development work has brightened to some extent in the old Lima Field of northwestern Ohio and indications are the coming summer will show quite an improvement so far as new drilling operations are concerned. Attempts will be made to extend the present producing area of the Trenton limestone and there are still many inside locations to drill. The wells may not be large, but are profitable, as there is a market for all Trenton lime crude that can be brought into the market.

In Seneca County, Hopewell Township, J. H. Murphy & Sons have a light gas well in No. 2 on the Knepper farm, Section 11, the gas being found in the Trenton lime from 1,456-90 feet. Same parties are drilling No. 1 Fay E. Sparks farm, same section. M. P. McPheron and others' No. 2 Frank Fox farm, same section, is now rated at 55 bbls., while J. H. Murphy & Son's No. 2, Joseph Bihn farm, Section 11, reported with an initial of 150 bbls. from the Trenton, at 1,470-95 feet. Same parties are starting No. 3 Cyrus D. Knepper, also in Section 11. Industrial Oil & Gas Co. is drilling No. 1 Mathias W. Hunker, Section 11, same township. E. E. Holsinger and others are drilling No. 1 Andrew D. Bickler, Section 14. Sandusky Gas Co. is drilling on the Lorenzo D. Creeger farm, Section 15, and Ray Temple is drilling No. 1 Roy Knepper farm, Section 11, Hopewell Township. In Liberty Township, same county, L. Curry drilled in a light gas well on the Lloyd Hoover, Section 34, and the Tiffin Industrial Gas Co. is drilling on the C. Swartzmiller, Section 35, same township.

In Wood County, Montgomery Township, Onsel Brothers, abandoned old Nos. 4, 5, 6, 7 and 8 A. T. Carpenter farm, Section 34. Same parties abandoned No. 1 J. G. Steiner, Section 9, Freedom Township. In Henry Township, H. A. Werner abandoned No. 1 E. C. Blackall, Section 24, and the Ohio Oil Co. Nos. 10, 11 and 14 W. S. Eberly, Section 11, same township.

Sandusky County

In Sandusky County, Rice Township, the Ohio Oil Co. abandoned No. 5 I Waggoner, Section 6. In Sandusky Township, same company abandoned Nos. 2 and 12, Samuel B. Waggoner, Section 18, and No. 11 Daniel Hensel, same section. In Washington Township, same county, the Ohio Oil Co. abandoned No. 4 Hattie Wolfe farm, Section 34. L. G. Wells and others are drilling on the J. G. Draeger farm, Section 26, also in Washington Township.

Pember and Reydner are drilling on the Ray and Ellsworth Wagner farm. Section 27, Jackson Township, Hancock County.

In the western part of Lucas County, not far from Monclova, R. B. Reed and others are drilling a second test on the Emmett Holloway farm, Section 29, Springfield Township. In Monclova Township, M. Gray and others are drilling No. 1 Keil Brothers farm, Section 28; Dillon & McFredericks are drilling No. 2 H. and A. Goldbraith, and John Doblinger is drilling No. 1 Knauss, Section 8, and No. 1 Solomon S. Betts farm, Section 8.

In Allen County, Amanda Township, the Ohio Oil Co. abandoned Nos. 1, 2, 3, 4, 5, 7 and 9 A. B. Moorman farm, Section 29, and in Perry Township, Henry Hefner & Sons abandoned Nos. 2, 4 and 5 Henry Hefner farm, Section 1.

C. A. and F. Peavy are drilling No. 15 on the Elias Lewis farm, Section 1, Bath Township, Allen County.

Kelley Brothers are reported drilling near the Trenton lime on the Lunne farm a mile north of Kalida.

Lee Booth drilled in a 500,000-foot gas producer on the A. and J. Breymaier farm, Section 7, Mississinewa Township, Darke County.

CENTRAL OHIO

Ten completions were reported from the Central Ohio Field, of which two were producers with an initial of 55 bbls., five were gas wells and three dry holes. As a gas producing area the Stark County Field is far ahead of any other county in the field, and the wells are more productive of gas, but it requires approximately from 4,200 to close to 4,500 feet to get the gas.

In Stark County, Jackson Township, the Wiser Oil Co. brought in a gas well in a second test on the Lake-O-Spring property, Section 14, from the Clinton lime formation from 4,351-80 feet. The East Ohio Gas Co. drilled in two gas producers, in No. 2 Elza Hall farm, Section 12, same pool, in the Clinton from 4,411-46 feet, the other being No. 4 T. K. Harris farm, Section 25, same township, in the Clinton farm 4,414-37 feet. There are 15 wells drilling in Jackson Township, one shut down and owned by W. F. Shetler on the A. L. Funk farm, Section 22.

In Medina County, the Oko Oil & Gas Co.'s No. 54 Henry Essig farm, Section 13, Chatham Township, is reported with 6 bbls. initial at 400 feet, the Berea sand. Edson Sons Co.'s No. 35 George W. Packard farm, Lot 4, same township, produced 50 bbls. initially from 345 to 376 feet, while the same company's No. 22 A. W. Shaw farm, Lot 5, failed to find any Berea sand and is a dry hole. Barnhart and others' No. 9 Joseph Funk farm, Lot 6, Harrisville Township, same county, is also a dry hole in the Berea sand from 385 to 417 feet, the sand being badly broken up.

Reno Oil & Gas Co. has a rig on the S. S. Day farm, Section 11, Jefferson Township, Knox County.

Frey and others have a rig in for No. 3 on the J. R. Weaver farm, Lots 3 and 4, Fairfield Township, Tuscarawas County. Oxford Oil & Gas Co. is drilling a second test on the Martha Carroll farm, Sections 33-33, Washington Township, same county.

In Guernsey County, Wheeling Town-

(Continued on Next Page)

Important Test in Marietta Township

Another to Drill to Third Warren in Washington County, Ohio. Dry Holes in Medina County. West Virginia Has Three Gas Wells, Three Dry

By Staff Correspondent

PITTSBURGH, Pa., May 2.—Following closely the welcome 20 cent advance in the posted price of Pennsylvania Grade crude, all operators, with whom contracts exist for all oil as run, were notified by the South Penn Oil Co. that the present curtailment schedule will be maintained during the month of May viz 90 per cent of November, 1931, production. In the notice sent to operators connected to the Buckeye Pipe Line Co. in Southeast Ohio, the Eureka Pipe Line Co. in West Virginia, and the Southwest Pennsylvania Pipe Lines in Southwest Pennsylvania, the South Penn Oil Co. states:

"Our company has notice that its outlet for Pennsylvania Grade Oil throughout the month of May will be the same as through the month of April. Therefore, we must again ask that all our customers continue their curtailment of production throughout May in keeping with the curtailment asked for the month of April.

"We must again mention that since we hold standing orders for the transfer to our credit of all Pennsylvania Grade as run, we will be compelled to cancel these orders should we find the April production exceeding the amount asked for, or should the month of May exceed that amount.

"We trust you will appreciate that we are doing everything we can to expand the outlet for Pennsylvania crude and that you will help us in this effort to effect an orderly curtailment of production until such a time as the demand returns to normal."

SOUTHEAST OHIO

In the scene of interest in southeast Washington County, Ohio, neither of the two deepest wells reached the third Warren formation and they are expected in from day to day. In SW Section 24, Grandview Township, Thomas McVey and others resumed drilling in their test on the Cordray Sisters farm and it is due in the sand. The depth is now in excess of 3,000 feet, drilling having been suspended a few days for repairs. In the offset to the discovery well on the Crago farm, which is still holding up as a good producer, Ed J. Mildren has run 1,150 feet of casing in the hole and is preparing to resume operations. This test is on the William Barber farm.

Back of Newport, at the mouth of Dana's Run, SE Section 34, J. L. Swingle and others, who are drilling on the Michel Edwards farm, passed through the first Warren formation with a showing for about 10 bbls. a day. Drilling was continued and the cap rock of the second Warren was struck at about 2,845 feet. There was a slight showing of gas at this depth.

Another important test in this field was announced by Robinson Brothers of Columbus, who have acquired considerable acreage in this district, reported in the neighborhood of 2,000 acres. Their initial test will be on the William Stewart farm near the Congregational Church on Goose Run in Marietta Township. Material for the rig is being moved on the ground and it is planned to drill to the third Warren formation unless halted by shallower production.

Medina County

There were two dry holes drilled in Medina County. F. Barnhard and others found the Berea grit formation underlying the J. W. Funk farm in the northeast quarter of Harrisville Township dry in No. 6 after drilling to 425 feet. The Oko Oil & Gas Co. found the same formation dry at 392 feet in No. 55 on the Henry Essig farm on Lot No. 3, Section 13, Chatham Township.

L. G. Sims has a 2-bbl. producer in his No. 3 on the A. M. Moore farm in Bearsfield Township, Perry County. The Moore farm is in Section 24.

Drilling in Southeast Ohio

In Carroll County, Eaton and others are drilling at 1,100 feet in No. 8 on the Nelson E. Slates farm in Louden Township, and are at 1,200 feet in No. 4 on the Jennie Chase farm. In the same township, George W. Elliott and others have reached 1,250 feet in their No. 3 on the H. G. Buchanan farm. The Lisbon Oil & Gas Co.'s No. 4 on the James Hanna farm in Center Township is drilling at 1,200 feet.

Harper Brothers have reached 700 feet in their well on the Douces Morland farm in Section 31, Enoch Township, Noble County, and in the same county, but in Olive Township, Woodford Brothers have a rig on the George Woodford farm in Section 15.

WEST VIRGINIA

The West Virginia division reports three gassers and three dry holes. There were no oil producers completed.

Victor Tennant drilled the test on his own farm deeper to the Fifth Sand and a depth of 2,653 feet, at which depth this well is a very light gasser. The Tennant farm is in Paw Paw district, Marion County. In Peytonia district, Boone County, the Columbia Carbon Co. has a gasser good for 160,000 feet on the Bull Creek Coal & Land Co. tract.

In Ritchie County, the test of W. H. Bickel on the Guy Fluharty farm in Murphy district, was completed as a 500,000-foot gasser.

Mollohan and others drilled their No. 1 on the M. Hinkle farm in DeKalb district, Gilmer County, to the Injun sand at 1,890 feet at which depth it was found dry. This was No. 849 of the Hope Natural Gas Co. being drilled deeper. It will be abandoned. Godfrey L. Cabot's No. 23 on the Quincy Coal Co. tract in Cabin Creek district, Kanawha County, was completed as a dry hole, as was the test of Allen and Bickerstaff on the H. Allen property in Murphy district, Ritchie County.

Drilling in West Virginia

In Gilmer County, A. E. Ellis and others are drilling at 1,200 feet in their test on the Alice M. Ayers farm in DeKalb district. In the same district, Frank Golden and others have constructed a rig on the H. E. Engle heirs farm.

R. C. Jackson has reached 1,440 feet and is shut down on the Rutherford heirs farm in Grant district, Ritchie County. W. R. Hayes and others are fishing for their tools in their second test on the Wilson Brothers farm in Murphy district, at 1,000 feet. C. B. Lewis and others also have a fishing job on hand in their second test on the Delia Lyons farm in the same district at 975 feet.

In Harrison County, the Delaware Gas Co. is shut down at 2,400 feet in its second test on the Reynolds heirs farm in Eagle district, as are Fry and McCracken in their test on the Clinton E. Fry property in Cameron district,

Marshall County. The Fry well has been drilled to 2,000 feet. Myers Oil Co. has a rig standing on the C. M. Strickland farm in Sandhill district, Marshall County.

In Wood County, the Four States Gas Co. is rigged up but shut down on the John Roberts farm in Walker district. Hugh Prather's test on his own property in the same district is standing at 500 feet and shut down. The test of Warren Reed on the C. S. Reed farm in Williams district, is shut down after drilling to a depth of 1,200 feet.

Locations have been made by the Celia Oil & Gas Co. for No. 5 on the John Tormey farm and by H. C. Zogg for No. 3 on the Maddox heirs property in Scott district, Putnam County.

In Monongalia County, the West Penn Gas Corp. is shut down in its test on the Wood Kimble farm in Battelle district, with the bit in the hole at 2,580 feet. In Clay district, same county, the Pedlar Run Oil Co. is shut down in its test on the Lewis R. Hess farm after drilling to 2,570 feet.

Wayne United Gas Co. remains shut down in No. 40 on the A. W. Wilson heirs farm in Lincoln district, Wayne County, at 1,720 feet. Locations have been made by the same operator for Nos. 52 and 53 on the Hoard Baldwin farm in Stonewall district. Owens-Illinois Glass Co. has made a location on the T. A. Copley farm in Lincoln district, same county. The test of the Thompson Harris Co. on the Samuel Hinkle farm in Williamsburg district, Greenbrier County, remains shut down at 1,940 feet in litigation.

In Wayne County, the Penn Natural Gas Co. is moving in a machine on the Guyan Valley Bank tract in Union district, for a second test. Southern West Virginia Gas Co. is down for repairs, after reaching 618 feet on the A. W. Preston farm in Union district.

Shimwell Oil & Gas Co. is shut down with the tools in the hole on the W. J. Price farm in Grant district, Wetzel County. A depth of 3,053 feet had been reached.

SOUTHWEST PENNSYLVANIA

There is very little drilling being done in the Southwest Pennsylvania division. The week brought report of but one completion and that a dry hole drilled by the Equitable Gas Co. on the Ed Cowell farm in Whitely Township, Greene County. This test was drilled to 3,360 feet and will be abandoned.

Drilling in Southwest Pennsylvania

Schaffer & Co. have a rig standing for No. 3 on the Henry Schaffer farm in North Fayette Township, Allegheny County. D. L. Shafer & Co. remain shut down in the test on the William Jones farm in Wayne Township, Greene County, after drilling to 850 feet. In Beaver County, C. O. Inglefield and others have reached 2,250 feet on the D. P. Inglefield property.

CENTRAL WEST FIELDS

(Continued from Preceding Page)

ship, four wells are being drilled and Charles Smith and others have a rig on the Edward and Kate Dodds farm, Lot 24, Cambridge Township, same county.

In Belmont County, the Ohio Fuel Gas Co. drilled in a Berea sand gas well in No. 1-5,644 John A. Vogt farm, Section 32, Somerset Township. Bradfield and others are drilling on the Brown-Humphrey land, Section 35, Union Township. Same company is drilling on the Margaret Campbell farm, Section 2, Kirkwood Township, same county.

Vulcan Gas Co. found the Maxon sand from 829 to 891 feet, striking a wet gas and shut down, with expectations of drilling to the lower Berea sand in the near future.

INDIANA

The only completions reported from the Indiana Fields was a dry hole drilled by Lloyd and others, No. 1 Thompson-Crathers farm, Section 1, Hadden Township, Sullivan County. Dr. Charles C. Talliaferro, Jr., is drilling on the B. F. Rynerson farm, Section 21, Prairie Creek Township.

Wabash Public Service Co. is reported drilling No. 3 G. B. Allen farm, NE Section 22, Columbia Township, Gibson County. No. 2 well, the last completion on this farm, was reported with 7,000,000 feet of gas. Knox Engineering Corp. is drilling a second test on the Charles C. Steele farm, NE NE Section 22, same township. No. 1 well on the Steele was the largest gas producer ever found in Indiana, 17,500,000 feet. In Washington Township, same county, the Gib Van Oil Co. is said to be drilling No. 5 Agnes Haskins, SE Section 18. Big Four Oil & Gas Co. is also reported drilling No. 3 Lottie Hope, SE Section 18, same township, and No. 1 Robert Huey farm, same section.

William H. Wood is drilling on the Ross L. Marts, NW Section 29, Curry Township, Sullivan County, and Wyman & Brown are drilling No. 1 Lawrence Putnam farm, same township.

ILLINOIS

Two completions were reported from the Illinois fields, both dry holes. They are John Phipps' test on the I. M. Laughead, Section 3, Montgomery Township, Crawford County, and W. C. McBride, Inc.'s No. 1 Charles Seaney farm, Section 33, same township.

In Honey Creek Township, Crawford County, the Ohio Oil Co. abandoned No. 1 J. W. Ford, Section 7; Nos. 1 and 2 J. W. Ford, Section 12; Nos. 3, 4 and 5 Elizabeth Parker, Section 13; No. 2 S. V. Allison, Section 12; Nos. 1 and 2 C. L. Weger, Section 12; Nos. 3 and 4 H. I. Jones, Section 1, while Ohio Oil and Associated Producers companies abandoned Nos. 1, 2, 3, 4 and 5 S. L. Martin, Section 18, a total of 16 wells.

In Parker Township, Clark County, on Parker Prairie, where big shallow production was found in the early days of this field, 28 wells were abandoned, by the Ohio Oil Co., Nos. 2, 3, 6, 7, 8, 10, 11 and 12 M. L. Briscoe farm, Section 5; Nos. 2, 4, 5 and 8 E. G. Epperson, same section; Nos. 1, 2, 3, 4 and 9 J. S. Goble farm, same section, and Nos. 3, 4, 5, 6, 7, 9, 11, 13, 15, 16 and 18 Drake heirs farm, also in Section 5, Parker township.

KENTUCKY

Oil bringing $1.05 in the Owensboro Field should bring renewed activity in the western Kentucky areas, comprising several counties, and a dollar a barrel for Logsdon Valley, Hart County, crude is at a point where the Hart County operators have been working for many months.

Completions were few in any portion of western Kentucky fields. Henderson County comes to the front with a well with an initial of 50 bbls., drilled by the Imperial Oil & Gas Products Co., in No. 2 S. A. Freeman farm, in the Niagara Field, while the same company's test on the Paris Walker farm, same field, was drilled to a total depth of 1,000 feet and is dry.

In Muhlenberg County, the Ohio Oil Co. struck a 1,000,000-foot gas well on the A. F. Walker Account 2 farm, near Greenville, at a depth of 680 feet.

One of the deepest drilled holes in Kentucky has just been completed by James C. Ellis, in his No. 1 on the Tom Henry farm, near Iseland, in the Calhoun Field of McLean County, the total depth of 4,000 feet and dry. The well is 800 feet from the north line and 400 feet from the east line of the lease. Hupp and Duff are drilling on the H. Johnson farm, in the Barrett Hill area of the same county. Cameron & Thompson are drilling No. 3 on the Edward Sommers farm, same field.

The only completion reported from Hart County is the Mud Branch Oil & Gas Co.'s No. 3 Mrs. Emmitt Seymour farm, in the Bonneville area of the county, and is estimated around 30 bbls. a day. No. 4 same farm is nearing completion.

In Hopkins County, the Federal Fuel Corp. drilled in a dry hole in No. 2 on the T. W. Reynolds farm, 2 miles north of Madisonville, also found a dry hole in No. 1 on an unknown farm, same area.

INTEREST IN SOUTHWEST TEXAS IS STIMULATED BY DISCOVERIES

By B. D. Stevenson

SAN ANTONIO, Tex., May 2.—Discovery of a new pool 3 miles north and one-half mile east of the Government Wells Pool in northern Duval County, coupled with the profitable production in both the Government Wells Pool and the extension a mile south of it, has intensified interest in that district and in several important wildcats that have started. Also a little over 40 miles north of it Jacob, Buzzini & Pickett's No. 1 Leonard Jacob at 962 feet has important enough showing of oil to entice operators to follow the trend on northeast across McMullen County.

The chain of pools in the Laredo district starting in Zapata and Jim Hogg Counties on the south, angles across the southeastern part of Webb and the northwestern part of Duval Counties. Seacord & Putnam's No. 1 Johnson in NW NW of Survey 44, 3 miles north of the Government Wells Pool, a 10,000,000-foot gas well at 1,574 feet total depth with sand topped at 1,567 feet, marks the most northern production. It sprayed some oil with the gas and may blow in an oil well if opened up. This sand in the Government Wells Pool was nearly 50 feet thick. Production in that field is from a deeper sand at around 2,350 feet. These pools all follow more or less closely the Reynosa Escarpment. This escarpment is traced from the Rio Grande across McMullen County into Live Oak County.

Capps and Smith's No. 1 Duval County Ranch Co. in Survey 576, 2 miles southwest of the Government Wells extension in sand at 2,350-55 feet, the same sand as is producing in the field and south extension, set casing and at latest reports is ready to bail, the cores of the sand showing a saturation of oil.

It is 10 miles from that test southwest to the most northern production of the Kohler Field where production is from a sand at around 1,700 feet but on north through McMullen County the operator following the "trend" theory has several good arguments favoring more pools.

Along this line in northern Duval and southern McMullen Counties the Humble drilled a lot of core tests in the Loma Alta area and later bought considerable land in fee but has not developed the field. In approximately the center of McMullen County, 20 miles north but slightly west of this trend there is a shallow field at around 650 feet that has produced a small amount of oil, but directly in the trend 12 miles north of Loma Alta is the Shiner ranch where many geologists have worked out a structure and some gas has been found. Six or 8 miles northeast of that is the new shallow gas field recently brought in by V. G. Schimmel with one well completed; another 6 or 8 miles northeast of that is the Calliham shallow oil and gas field, and another 4 miles northeast of that, the Jacob, Buzzini & Pickett's No. 2 Leonard Jacob, which is testing an oil sand at 962 feet. No. 1 Jacob came in a gas well making 4,000,000 feet and No. 2 Jacob, started for testing deeper sands, is 150 feet northwest of No. 1 Jacob.

Operators in this entire area of around 100 miles in length have a number of good sands to shoot at. A little over a mile west of the north end of the Kohler gas field, the Humble Oil & Refining Co. completed five oil wells at around 2,750 to 2,800 feet. They are not very big producers but disclosed a sand at that depth 6 to 10 feet thick. The Kohler Field is producing both oil and gas, the subsea data on top of the sand being around 1,000 feet and total depths varying from 1,760 to 1,880 feet.

In the Cole Field in southwestern Duval County there are several sands proven though only one sand at about the same depth as in the Kohler Field has been developed to any great extent. Some of these sands have been shown to have plenty of thickness.

About 2 miles northeast of the Jacob, Buzzini & Pickett's No. 2 Jacob, the same operators drilled No. 1 Brewer in Live Oak County and cored a number of sands and identified the Pettus sand at the base of the Jackson at 1,087 feet. Several of the sands had some pretty good showings of oil and gas.

OUSTER ARGUMENTS POSTPONED

AUSTIN, Tex., May 2.—The state's suit for ouster and penalties of $17,850,000 against 15 major oil companies and two petroleum associations has gone over from May 2 to May 23 as to arguments on the exceptions but the testimony before the commissioner, George C. Shelly, will start May 9, as previously fixed.

TIMOTHY COUGHLIN DEAD

BRADFORD, Pa., Apr. 30.—Timothy Coughlin, aged 95 years, retired oil producer, died in the Bradford hospital yesterday from injuries received in a fall Thursday. Mr. Coughlin had been a resident of Bradford 55 years and until his retirement with a comfortable fortune had been an active oil producer in the field since the early days of development.

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Continued from Page 57)

R. A. Keaton's No. 1 Stephens, Sec. 25-10-6, 320 ft. N and W, SE cor. NW NW.....S.D. 1,500 ft.
H. W. Perritt's No. 1 Cook, 165 ft. E, 105 ft. N, SW cor. NE SW, Sec. 3-8-9.....Rigging up.

OUACHITA PARISH

Wilson & Mitchell's No. 1 Williams, Sec. 5-16-1e, 330 ft. E, 240 ft. S, NW cor. SW SE.....Drlg. shale and chalk 2,930 ft.

RED RIVER PARISH

C. F. Davis' No. 1 Pierson, 500 ft. S, 317 ft. E, NW cor. SW NW, Sec. 12-14-11.....Location.
La. Oil Dev. Co.'s No. 2 La. Delta Pecan Co., 2,950 ft. S, 300 ft. E, NW cor., Sec. 27-13-11.....Spudded and S.D. 50 ft.

RICHLAND PARISH

National Gas Co.'s No. 1 Singletary, 1,980 ft. N, 660 ft. W, SE cor., Sec. 20-18n-7e.....S.D. 2,515 ft.

SABINE PARISH

Beene et al's No. 1 Ezernack, Sec. 2-7-13, 1,070 ft. S, 250 ft. W, NE cor. .....Flowed 2,500 bbls. for 6 hrs.; bridged over; T.D. 2,400 ft.
R. W. Boulding's No. 1 Williams, Sec. 17-7-10, 200 ft. S and E, NW cor. SW NE .....Rigging up.
J. M. Bridges' No. 1 Armstrong, 360 ft. N, 320 ft. E, SW cor. SE, Sec. 28-10-11.....Drlg. 900 ft.
Broderick & Calvert's No. 1 Costello, Sec. 2-7-14, 375 ft. S, 150 ft. W, NE cor. SE NW.....S.D. 150 ft.
W. M. Coates' No. 1 Stille, 330 ft. N, 660 ft. W, SE cor., Sec. 35-8-13 .....Derrick.
Craig et al's No. 1 Travis, Sec. 13-7-11, 200 ft. S and E, NW cor. SE NW .....Set 10-in. 100 ft.
B. A. Ferrell's No. 1 Haley, Sec. 6-7-12, 300 ft. S and E, NW cor. NW SW.....Drlg. 1,220 ft.
R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 200 ft. W, NE cor. NW NW, Sec. 10-8-13.....Coring 4,962 ft.
J. I. Hall's No. 1 Williams, SE NW, Sec. 3-7-10.....Drlg. 2,410 ft.
D. Holcomb's No. 1 Petty, 330 ft. S and W, NE cor. SW SW, Sec. 12-7-11 .....Derrick pattern.
Geo. LeGrand's No. 1 McGough, Sec. 3-8-10.....Rigging up.

J. J. Keen, tr.'s No. 1 Belton (no check), Sec. 31-9-13...Testing 3,128 ft.
A. D. King, tr.'s No. 1 Germain, Sec. 7-7-10, 330 ft. E, 518 ft. N, SW cor. NE NE.....S.D. 1,170 ft.
A. D. King, tr.'s No. 1 T. L. Andries, 200 ft. S, 300 ft. E, NW cor. SE SE, Sec. 15-7-11.....Location.
A. D. King, tr.'s No. 1 J. J. Andries, 140 ft. S, 240 ft. W, NE cor. SE SW, Sec. 15-7-11.....Derrick.
M. J. Kissick's No. 1 Buvins, 570 ft. S, 14 ft. W, NE cor., Sec. 20-7-11.....Location.
W. F. Lacey's No. 3 McNeely, Sec. 14-7-11, 300 ft. S and E, NW cor. NE NE.....Derrick.
Jack Lanier's No. 1 Petty, Sec. 11-7-11, 330 ft. N and W, SE cor. NE SE.....Drlg. 2,040 ft.
Mays et al's No. 1 Delong, Sec. 5-7-10, 275 ft. N, 175 ft. W, SE cor. SE SW.....Derrick pattern.
E. F. Neely's No. 1 Cobb & Alford, Sec. 14-7-11, 200 ft. S, 100 ft. E, NW cor. NE SW.....W.O.S.R. 2,485 ft.
E. F. Neely's No. 2 Clann, Sec. 14-7-11, 500 ft. N, 100 ft. W, SE cor. SE NW.....Flowing by heads 30 bbls.; 2,513 ft.
E. F. Neely's No. 1 Rains, 660 ft. N, 100 ft. W, SE cor., SW NW, Sec. 14-7-11.....Derrick.
C. E. Neff, tr.'s No. 1 Snell, Sec. 9-7-11, 350 ft. N, 660 ft. W, SE cor. Sec.....Drlg. 2,230 ft.
Palmer & Smitherman's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and E, NW cor. NE SE.....Location.
Palmer & Smitherman's No. 2 La. Long Leaf Lbr. Co., 330 ft. S and W, NE cor. SE, Sec. 12-7-11.....Location.
Palmer & Smitherman's No. 3 La. Long Leaf Lbr. Co., 330 ft. S and W, NE cor. NE SW, Sec. 12-7-11.....Rigging up.
J. F. Palmer's No. 1 Davis, Sec. 17-7-10, 200 ft. S and E, NW cor. NE NW.....Derrick.
Pelican Nat. Gas Co.'s No. 8 Sabine Lbr. Co., 330 ft. S and W, NE cor. NE SW, Sec. 3-7-13.....Derrick.
H. W. Perritt's No. 1 Brown Lbr. Co., Sec. 6-7-10, 330 ft. N and E, SW cor. SW SE.....Tested dry 2,763 ft; W.O.
Roy Raines et al's No. 1 Beard, 720 ft. E, 700 ft. N, SW cor. SW SE, Sec. 8-8-10.....Derrick pattern.
F. G. Reed et al's No. 1-A McNeely, 200 ft. N and E, SW cor. NW NE, Sec. 14-7-11.....Rigging up.
Ruston Drlg. Co.'s No. 1 Cutrer, 300 ft. S and E, NW cor. NW NE, Sec. 13-7-11.....Set 10-in. 100 ft; drlg. 1,850 ft.
Scully & Beach's No. 1 Lafitte, Sec. 13-7-11, 100 ft. S, 660 ft. E, NW cor. NW.....Set 6-in. 2,430 ft.
H. R. Smith et al's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and W, NE cor. NW SW.....Location.
J. E. Smitherman's No. 1 Smith, Sec. 7-7-10, 330 ft. S and E, NW cor. NW SW.....Dry and abd. 3,014 ft.
Southland Drlg. Co.'s No. 2 F. Martinez, Sec. 11-7-13, 330 ft. S and E, NW cor. NE NW.....Derrick pattern.
Southland Drlg. Co.'s No. 1 Gilbert Martinez, Sec. 2-7-13, 330 ft. N and W, Sec. cor. SW SW.....Derrick pattern.
Southland Drlg. Co.'s No. 1 Frost Lbr. Co., 330 ft. N and W, SE cor. NE NE, Sec. 13-9-11.....Rigging up.
State Prod. Co., Inc.'s No. 1 Davis, Sec. 17-7-10, 150 ft. N and E, SW cor. SW NW.....Derrick.
A. F. Tarver's No. 3 Cutrer, Sec. 12-7-11, 1,120 ft. E, 300 ft. N, SW cor. NW.....Testing 2,600 ft.
The Texas Co.'s No. 2-B Grauque, Sec. 10-7-13, 1,700 ft. W, 330 ft. S, NE cor. Sec.....Set 10-in. 101 ft; drlg. 900 ft.
Williams & Spiers' No. 1 Williams, Sec. 31-8-10, SE cor. SE SW.....Derrick.

TENSAS PARISH

A. R. Willis et al's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12.....S.D. 3,545 ft.

WEBSTER PARISH

J. K. Wadley's No. 1 Matthews, Sec. 11-23-9, 130 ft. N, 330 ft. E, SW cor. SW NE.....Coring 2,749 ft.

ARKANSAS

ASHLEY COUNTY

D. S. Brooks, Inc.'s No. 1 Crossett Lbr. Co., 330 ft. N and E, SW cor. SW SE, Sec. 31-15s-6w.....Drlg. shale 2,195 ft.

COLUMBIA COUNTY

Kendall Oil Co.'s No. 1 Fullenweider, Rhea & Kitchen, Sec. 13-17-22.....S.D. 814 ft.

CLAY COUNTY

S. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C, NW SE, Sec. 4-20-8.....S.D. 1,350 ft.

CLEVELAND COUNTY

Crum & Stillwell's No. 1 E. R. Bell, Sec. 10-10s-12.....Rigged up and S.D.

CLEBURNE COUNTY
(Cable tools)

Donnelly-Craver et al's No. 1 Donophan Lbr. Co., SE cor. NW, Sec. 33-11-9.....S.D. 3,740 ft.

CRAWFORD COUNTY

Ozark Nat. Gas Co.'s No. 1 C. E. Jones, 660 ft. N, 372 ft. E, SW cor. SE SW, Sec. 32-9-31.....Location.

DALLAS COUNTY

J. H. James, tr.'s No. 1 Fordyce Lbr. Co., 200 ft. S, 200 ft. E, NW cor. SE, Sec. 11-9-15.....D.S. stuck 2,575 ft.
Zepp O. & G. Co.'s No. 3 Hillman, Sec. 20-10-13, 180 ft. N, 450 ft. E, SW cor. NW NE.....Location.

DREW COUNTY

Co-Operative Dev. Co.'s No. 1 Ogles, Sec. 35-15-5, 330 ft. S and E, NW cor. NE NW.....S.D. 1,890 ft.

HOT SPRINGS COUNTY

Star Oil Co.'s No. 1 Cunningham, 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16.....Ratholing 1,306 ft.

LINCOLN COUNTY

Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 200 ft. W, NE cor. NE SW, Sec. 5-8-7.....S.D. 2,800 ft.

LITTLE RIVER COUNTY

Roberts Oil Co.'s No. 1 H. J. Russell, 330 ft. E, 330 ft. S, NW cor., Sec. 25-12-19.....Location.

LOGAN COUNTY

J. H. Flowers' No. 1 J. H. White, Sec. 13-6-26.....S.D.; W.O. 3,570 ft.

MILLER COUNTY

C. E. Litchfield's No. 1 Hervey, 525 ft. S, 350 ft. W, NE cor. NE NW, Sec. 2-15-26.....T.A. 2,385 ft.
Fitzwater et al's No. 1 Beck, Sec. 33-15-26.....Drlg. lime 2,665 ft.
W. E. Noel et al's No. 1 Dickson hrs., 1,980 ft. W, 660 ft. S, NE cor., Sec. 11-20-27.....Drlg. 2,200 ft.

OUACHITA COUNTY

Copenhaven et al's No. 2 Berg, C SE SE, Sec. 13-15-17..Set 6-in. 2,141 ft.
McLean et al's No. 1 L. D. Neely, Sec. 23-15-16, 200 ft. N and W, SE cor. NE SW.....S.D. 102 ft.

PIKE COUNTY

E. R. Henderson's No. 1 Tilyou, 660 ft. W, 500 ft. S, NE cor. NE SE, Sec. 26-8-14.....T.A. 2,909 ft.
E. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 31-8-24.....S.D.; W.O. 1,020 ft.
E. R. Henderson's No. 1 W. B. East, 200 ft. S, 150 ft. W, NE cor., Sec. 13-9-23.....Skidding over; to drill new hole.

PRAIRIE COUNTY

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW, Sec. 3-4n-6w.....Partly rigged up and S.D.

SCOTT COUNTY

Heavener O. & G. Co.'s No. 1 Riser, Sec. 36-4-26.....S.D.; T.D. 1,436 ft.
Waldron O. & G. Co.'s No. 1 White, NE cor. SW NW, Sec. 17-3n-29.....S.D. 1,860 ft.

SEVIER COUNTY

Tristate Oil Co.'s No. 1 Grimble, Sec. 34-8-22, S½ SW...S.D. 950 ft.

ST. FRANCIS COUNTY

Field & Jones' No. 1 F. M. White, Sec. 1-4n-2e, SW cor. NW.....S.D. 700 ft.

UNION COUNTY

Drillers Oil & Dev. Co.'s No. 1 Pickering, 220 ft. N, 668 ft. E, SW cor. NW NE, Sec. 1-17-16.....T.A. 2,134 ft.

H. H. Helms' No. 1 C. H. Murphy, NE cor. NW NE, Sec. 31-16-14.....S.D. 2,875 ft.
L. M. Hill et al's No. 1 J. W. Barnes, Sec. 21-19-16, NE cor. Sec.....Derrick abd.
Pigeon Hill Oil Co.'s No. 1 Union Sawmill Co., 330 ft. S and W, NE cor. NW SW, Sec. 19-17-12.....Set 10-in. 103 ft.
Sunby et al's No. 2 Perdue, Sec. 33-16-14, 75 ft. S, 150 ft. E, NW cor. Sec.....Junked and abd. 2,460 ft.
Wilson & Chapman's No. 1 King, Sec. 3-18-13, 330 ft. N and E, SW cor. NE NE.....Derrick.
Wilson & Chapman's No. 1-A D. Norman, 330 ft. S and E, NW cor. N½ NE SE, Sec. 3-18-13.....Drlg. 1,110 ft.

WASHINGTON COUNTY
(Cable tools)

C. H. Willoughby's No. 1 Jones, Sec. 34-16-30.....S.D. 1,795 ft.

YELL COUNTY
(Cable tools)

Tegmeier & Lockett's No. 1 Falcon, Sec. 36-7-21.....S.D. 5,710 ft.

EAST TEXAS

BOWIE COUNTY

Logan & Elliott's No. 1 Smith, 9,600 ft. S, 2,500 ft. W, NE cor. Chas. Lewis Sur.....S.D. 4,505 ft.
Lanford et al's No. 1 W. W. Whybark, 200 ft. S, 200 ft. W, SW cor. J. H. Dyer Sur.....S.D. 1,792 ft. (corrected).
Lee Timberlake et al's No. 2 Tidwell, 2,510 ft. N, 655 ft. W, SE cor. T. M. Rice Sur.....S.D. 3,000 ft.

CASS COUNTY

Davis & Pigg's No. 1 Roy Bryan, SW cor. Roy Bryan 88-ac. tr., Albert H. Lattimer Sur.....Arranging to resume drlg. 2,860 ft.
C. E. Murdock's No. 1 First National Bank, Evans Watson Sur.....S.D. 4,390 ft.
John C. Rogers' No. 1 I. E. Lanier, 573 ft. N, 879 ft. W, SE cor. Lanier 86 ac. in K. E. Welborn Sur.....S.D. 2,280 ft.
John C. Rogers et al's No. 1 W. Q. Henderson, 3,100 ft. S, 3,100 ft. E, NW cor., Wm. Davis Sur.....S.D. 960 ft.

HARRISON COUNTY

Lloyd Oil Corp.'s No. 1 E. S. Timmons, 150 ft. from N line to 250 ft. from E line of 105-ac. tr., Findley Sur.....S.D. 4,195 ft.
Tom Medders et al's No. 1 Davidson, NW cor. R. W. Starr Sur.....Coring 3,710 ft.
J. G. Peterbaugh et al's No. 1 Colluns, 330 ft. from W line, 1,060 ft. from S line of 75-ac. tr., W. G. Pentecost Sur.....Set 10-in. 104 ft; drlg. 1,840 ft.
Ryan Cons. Pet. Corp.'s No. 1 J. M. Fuhr, 1,300 ft. N of NW cor. T. J. Copelin Sur., 1,675 ft. SW at right angles to NW SE line of O'Neal Sur.....Derrick.
Triangle Drlg. Co.'s No. 1 Platt, 1,125 ft. W, 1,995 ft. N, SE cor. F. C. Barker Sur.....Location.

MARION COUNTY

Baunoch Dev. Co.'s No. 1 Miller, 725 ft. N, 1,470 ft. E, SW cor. H. Fulgram Sur. (was Gist, Claunch & Dodson).....Drlg. 3,900 ft.
Benedum & Trees' No. 1 Tyler, 400 ft. S line, center of E and W lines, Wm. Holloway Sur.....Coring shale 3,446 ft.
Geo. Hindeman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 3,555 ft. E most easterly W line, Alexander Albright Sur.....Arranging to resume drlg. 2,380 ft.

PANOLA COUNTY

Moses & Wallace's No. 1 Daniel, 600 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur...Set 10-in. 85 ft.
G. A. Davidson's No. 1 Latham, Wm. Rich Sur.....Coring lime 2,680 ft.
J. L. Nelson et al's No. 1 J. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr. in James Hanks Sur.....S.D. 3,055 ft.
United Prod. Co.'s No. 2 Werner, 1,350 ft. N, 542 ft. E, SW cor. 95-ac. tr., B. C. Jordan Sur.....Comp. 17,000,000 ft. gas 2,912 ft.

SHELBY COUNTY

E. L. Chapman's No. 2 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. D. S. Height Sur.....Rigging up.
Chapperell Oil Co.'s No. 2 Holt, Matthew Moore Sur.....S.O. 7-ft. core, 3,725-32 ft.
Fuller & O'Brien Bros.' No. 1 Frost-Johnson Lbr. Co., 200 ft. S, 150 ft. W, NE cor. 168-ac. tr., Aaron Castleberry Sur.....Drlg. 2,324 ft.
K. H. Francis' No. 1 John Mims, Mary Smith Sur.....Fishing 3,282 ft.
H. H. Gracey's No. 1 J. A. Morrison, 1,500 ft. N, 200 ft. E, SW cor. J. A. Morris' 109-ac. tr., William English Sur.....S.D. 2,600 ft.
Henry Maulding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 20-ac. tr., A. D. Fountain Sur.....S.D. 3,246 ft.
McRoby et al's No. 1 Windham, Wm. Leach Sur., on Windham 296-ac. tr.....Pulling 6⅝-in. csg. 3,393 ft.
Ridgeway et al's No. 1 Polley, Dominguez Gonzales Sur., 3,180 ft. E of SW cor., 160 ft. N at right angles of Polley 457-ac. tr.....S.D. 465 ft.
Sedberry et al's No. 1 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. Jane Stoddard Sur.....Set 10-in. 60 ft; drlg. 400 ft.
C. H. Tautenhahn's No. 1 J. C. Bogard, 300 ft. S, 900 ft. E, NW cor. J. C. Bogard's 52-ac. tr., Thomas Baker Sur.....S.D. 20 ft.
Western World's No. 1 Foster, Billingsby-Jeremiah Bowlin Sur.....S.D. 2,568 ft.
Wray & Dunbar's No. 1 C. A. Hayden, 600 ft. N and W SE cor. 152-ac. tr. in D. T. F. Yordt Sur.....Fishing D.S. 400 ft.

LOUISIANA-ARKANSAS PROVEN AREAS

NORTH LOUISIANA
CADDO PARISH—PINE ISLAND

Company, well, farm name, section and block— Remarks:
Calatex O. & G. Co.'s No. 1 Scott, Sec. 5-16-16, 1,320 ft. E, 300 ft. N, SW cor.....Drlg. 1,925 ft.
Simplex Oil Co.'s No. 1 Youree-Glassell, 500 ft. N and E, C, Sec. 13-20-15.....S.D. 2,275 ft.

OUACHITA PARISH

Carbon Con.'s No. 7 Guthrie, Sec. 50-20n-4e, 5,263 ft. N, 7,475 ft. W of cors. of Secs. 25, 26 and 49, in Sec. 50.....Location.

SABINE PARISH—ZWOLLE

O. J. Baird's No. 2 Duggan, Sec. 14-7-11, 200 ft. S and E from cen. Sec.....1,800 ft. oil in hole 2,505 ft.
Crescent Drlg. Co.'s No. 4 Byrd, 200 ft. N and W, SE cor. NW NE, Sec. 12-7-11.....Rigging up.
Dengail O. & G. Co.'s No. 1 E. Nulton, 224 ft. E, 330 ft. N, SW cor. NW NW, Sec. 1-7-13.....Rigging up.
Dengail O. & G. Co.'s No. 1-F Nulton, 330 ft. S and E, NW cor. SW NW, Sec. 2-7-13.....Location.
Dengail O. & G. Co.'s No. 1-G Nulton, 350 ft. N, 330 ft. W, SE cor. NE NE, Sec. 3-7-13.....Rigging up.
Depression Oil Co.'s No. 1 Peters, 355 ft. N, 340 ft. W, SE cor. SW SW, Sec. 11-7-11.....Derrick.
Hudson & Bird's No. 1 Walden, 480 ft. N, 300 ft. E, SW cor. SW NE, Sec. 26-8-11.....Washing to bottom 2,442 ft. (cor.)
Zeke Lohman's No. 1 McCormick, 660 ft. E, 330 ft. N, SW cor. NE SW, Sec. 2-7-11.....Tested dry; W.O. 2,680 ft.
Loring Oil Co.'s No. 18 Bowman-Hicks, 1,280 ft. S, 275 ft. E, NW cor. SW NW, Sec. 15-7-12.....Sidetracked D.S. 4,480 ft; drlg. 4,542 ft.
Ben Merritt, tr.'s No. 3 Byrd, 100 ft. E, SW cor. NW SW, Sec. 1-7-11.....Setting tubing with packer 2,440 ft.
Pelican Nat. Gas Co.'s No. 11 La. Long Leaf Lbr. Co., Sec. 10-7-11, 230 ft. N and W, SE cor. NE NW.....W.O.S.R. 2,592 ft.
Pelican Nat. Gas Co.'s No. 13 La. Long Leaf Lbr. Co., 330 ft. N and W, SE cor. NE SE, Sec. 9-7-11.....Set 10-in. 104 ft.

Sabine Prod. Co.'s No. 3 Pearce, Sec. 10-7-11, 330 ft. S and E, NW cor. SE NW.....Testing 2,699 ft.

UNION PARISH

Interstate Nat. Gas Co.'s No. 2 Steele, 1,980 ft. W, 660 ft. N, SE cor., Sec. 26-20-3e.....Location.
Interstate Nat. Gas Co.'s No. 3 Steele, 660 ft. S and E, NW cor. NE, Sec. 26-20-3e.....Location.
Southern Carbon Co.'s No. 59 fee, 660 ft. N, SE SW cor. SE, Sec. 17-20-4e.....Set 12½-in. 189 ft; drlg. 514 ft.

ARKANSAS

UNION COUNTY—EL DORADO

Lion O. & R. Co.'s No. 9-A G. P. Hayes, 242 ft. S, 246 ft. W, NE cor. Lot 5, NE, Sec. 4-16-15.....T.A. 7,255 ft.
Southern Prod. Co.'s No. 1 Wingfield, NE cor. SE NW, Sec. 16-19-15.....S.D. 3,590 ft.

UNION COUNTY—URBANA

Marine Oil Co.'s No. 1 Winn est., 330 ft. S and E, NE cor. S½ NW, Sec. 11-18-13.....T.A. 3,586 ft.
Marine Oil Co.'s No. 2-E Thompson, 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 10-18-13.....Location.
Wilson & Chapman's No. 1-B Hadley, Sec. 3-18-13, 330 ft. S and W, NE cor. SE NW.....T.A. 3,545 ft.
Wilson & Chapman's No. 2 Emily King, Sec. 3-18-13, 150 ft. S, 150 ft. E, NW cor. NE NE.....Drlg. 1,550 ft.

EAST TEXAS

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur. .....T.A. 2,194 ft.
Nat. Gas Prod. Co.'s No. 1 Hawkins, 125 ft. S and W, NE cor. 75-ac. tr., James Shandoin Sur. .....Set 6⅝-in. 2,826 ft.
United Prod. Corp.'s No. 17 Steele, 1,320 ft. N, 660 ft. W, SE cor. C. D. Steele lse., in B. C. Jordan Sur. ....Location.

MISSISSIPPI

HINDS COUNTY

McGuire et al's No. 1 Spring Lake, Sec. 11-5n-1e, 250 ft. N, 450 ft. W, from center of Sec. .....Drlg. Wilcox 2,200 ft.

RANKIN COUNTY

Meredith & Smith's No. 2 Strawder, Sec. 12-5n-1e, 2,582 ft. W, 300 ft. N, SE cor. NE.....Arranging to set csg. 2,317 ft.
Meredith-Smith et al's No. 3 Strawder, 400 ft. S, 750 ft. W, NE cor., Sec. 12-5n-1e.....Derrick pattern.
Owen & Weaver's No. 1 Fitzhugh, 1,740 ft. E, 225 ft. N, SW cor., Sec. 1-5n-1e.....Derrick.

WILDCAT OPERATIONS IN MISSISSIPPI

CLARKE COUNTY

Company, well, farm name, section and block— Remarks:
F. X. Gowans et al's No. 1 Elfring, SE NE, Sec. 13-1n-14e..Arranging to move in rig.

HINDS COUNTY

Atkins et al's No. 1 Crane Lawrence, Sec. 23-6n-1e, 300 ft. E, 132 ft. N, SW cor. NE SE.....Derrick.
Miss.-Minn. Oil Co.'s No. 1 Edwards Land Co., Sec. 23-6n-4w, 1,200 ft. N and E from center of Sec. .....Drlg. gumbo 2,600 ft.

JASPER COUNTY

Bay Springs Pet. Co.'s No. 1 Keyes, C NW NE, Sec. 2-12-9 .....T.A. 3,408 ft.

LAMAR COUNTY

Stauffer & Kouri's No. 1 Bond, SE NE, Sec. 18-2n-14w..Set 10-in. 1,050 ft; T.D. 1,090 ft.

LOWNDES COUNTY

Lowndes County Oil & Dev. Co.'s No. 1 Carr est., Sec. 34-17-16e, 1,320 ft. E, 330 ft. S, NW cor. Sec. .....Rigging up.

NEWTON COUNTY

Bob Dalton's No. 1 Majure, 400 ft. N, 300 ft. E, SW cor. SE, Sec. 25-6n-11e.....S.D. 840 ft.

NOXUBEE COUNTY

Thompson & Donohue's No. 1 Donohue, Sec. 25-16n-17e..S.D. 1,735 ft.

RANKIN COUNTY

Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e.Derrick.
Orr et al's No. 1 Hanna, Sec. 14-5n-1e, 500 ft. E, 250 ft. S, NW cor. SW.....S.D. for casing 2,380 ft.

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 2-8-9.....Spudded in 16 ft.: S.D.

SHARKEY COUNTY

United Gas Public Service Co.'s No. 1 Lenhart, Sec. 14-14n-6w, 660 ft. N of CSL of Sec. .....Drlg. Midway 3,620 ft.

WARREN COUNTY

Eagle Bend O. & G. Co.'s No. 1 Kiger, SW cor. SW SE, Sec. 9-18-2 ..... S.D. 2,607 ft.

WILDCAT OPERATIONS IN KANSAS

(Continued from Page 56)

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w .....Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW, Sec. 21-14-15.....S.O. 2,190-2,200 ft.; S.D.

PHILLIPS COUNTY

Hall et al's No. 1 Donaldson, C NE NE, Sec. 25-5-18w...Drlg. 1,020 ft.

PRATT COUNTY

Ninnescah O. & G. Co.'s No. 1 Hardesty, SW SE SE, Sec. 28-27-11w .....Rig.

RAWLINS COUNTY

J. G. Durham et al's No. 1 Weaver, SE cor., Sec. 2-2-35w..S.D. 3,925 ft.

RENO COUNTY

Martin et al's No. 1 Yadu, C NW NW, Sec. 15-24-5w....Rig.
Jarvis & Wright's No. 1 Rainbow, NW SE, Sec. 33-22-7w..Drlg. 3,060 ft.

RICE COUNTY

Slick et al's No. 1 Arth, SE NE Sec. 27-18-10w.....Location.
J. Liggett et al's No. 1 Thodel, C NW NW, Sec. 11-21-7w..S.D. 50 ft.

RUSSELL COUNTY

J. Brennan's No. 1 Waly, CNL E½ NW, Sec. 29-13-11w..Rig.

RUSH COUNTY

Skelton et al's No. 1 Brock-Hartman, SW SE NE, Sec. 4-18-16w .....S.D. 50 ft.

SALINE COUNTY

Twin Mounds Oil Co.'s No. 1 Weis, C W½ NE NW, Sec. 20-13-4w .....Top chat 3,028 ft.; cmtg. cave.

SEDGWICK COUNTY

Tulsa Oil Co.'s No. 1 Levert, C SE SW, Sec. 8-28-2w....Rig.

SHERIDAN COUNTY

Flo et al's No. 1 Shoemaker, SE SW, Sec. 27-7-26w.....Fishing 4,505 ft.

STEVENS COUNTY

Argus Prod.'s No. 2 Christopher, C NE, Sec. 10-33-39w..S.D. 5,521 ft.

SUMNER COUNTY

Trees Oil Co.'s No. 1 Tompkins, SW, Sec. 26-33-1.....Location.
Trees Oil Co. and Shell's No. 1 Springate, NE SE SW, Sec. 6-34-2 .....S.D. 2,790 ft.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 58)

CALDWELL COUNTY

Cole & Moseley's No. 1 Pierce, 150 ft. to NW and SW lines of tract, Solomon Seal Sur. .....T.D. 2,114 ft.; comp. 3,000 bbls.
George Sullivan and Shell Petroleum Corp.'s No. 1 Plinsoll, 2,800 ft. to SW line, 300 ft. to NW line of tract and survey in M. Dennis Sur. .....Bldg. derrick.
Kistler, Stivers & Hendrick's No. 1 D. Carter, 400 ft. from NW line of Sur., 300 ft. NE of Creek in I. Allen Sur. .....T.D. 1,485 ft.; standing in chalk.
Meyer's No. 1 G. C. and W. Walker, Solomon Seal Sur. ..T.D. 2,460 ft.; drlg.
C. J. Webster Oil & Gas Co.'s No. 1 McCrory in John Neil Sur. .....T.D. 2,279 ft.; comp. 100 bbls.
M. O. Rayor's No. 1 Kruse Bros., 450 ft. N, 150 ft. W of SW cor. of J. P. McCarley Sur. in Samuel Shupe Sur. .....Moving in.
Taylor Oil Co.'s No. 1 McBride, 12 miles NE Luling .....T.D. 1,400 ft.; drlg.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Stewart Nelson in L&G.N. Sur. No. 43 .....T.D. 670 ft.; set surface csg.

DEWITT COUNTY

Pat Armstrong's No. 1 E. T. Clark, 2,000 ft. S of Simms-Republic's No. 1 Clark in Jose Santos Sur.....Moving in.
J. F. Richardson's No. 1 Virginia Taylor, 330 ft. from SE line of tract, 330 ft. NE of Minnehuila Creek....Location.

DUVAL COUNTY

John F. Camp's No. 1 Well, 900 ft. NW and 150 ft. NE of cen. of Sur. No. 570 .....T.D. 2,438 ft.; set csg.
Frank Gravis et al's No. 2 Schallert, 425 ft. to E line, 150 ft. to S line of Blk. 16, Cain & Smith Subd. "A", Sur. No. 256 .....T.D. 1,610 ft.; standing.
French Oil Corp.'s No. 1 Flores in Survey 731, 1,000 ft. N, 25 degrees W of Sun Oil Co.'s No. 1 Flores in Survey 730 .....T.D. 1,470 ft.; drlg.
Jimmy Hicks' No. 1 Peters, SW cor. of most southerly part of Sur. 322 .....Location.
Hynes and Nessly's No. 1 Duval Ranch Co., 200 ft. from S and E lines of Blk. 26, Sur. No. 196 .....T.D. 1,335 ft.; S.D. for water.
O. W. Killam's No. 1 Peters, 150 ft. from E line, 450 ft. from N line of SE of Sur. No. 1 .....T.D. 2,725 ft.; standing.
Smith & Capps' No. 2 Duval County Ranch Co., 2,040 ft. from NW line, 225 ft. from SW line of Sur. 574..Rigging up.
Suttle et al's No. 1 Bennett, 150 ft. from N and E lines of Sur. No. 44 .....T.D. 1,608 ft.; drlg.; tested salt water.
R. A. Thompson's No. 1 Parr, 2,640 ft. to W line, 12,160 ft. to S line of San Andres grant .....T.D. 4,300 ft.; drlg.
Trinity Drillers, Inc.'s No. 1 Hagist, 3,892 ft. from W line, 4,400 ft. from S line of Sur. 122 .....Location.

GUADALUPE COUNTY

J. E. Clark's No. 1 R. Drummer, 600 ft. from SE line, 150 ft. from SW line of tract in Francisco Caravajal Sur. No. 47 .....Location.
Luling Oil & Gas Co.'s No. 1 J. D. Brown, 160 ft. from N line, 450 ft. from E line of tract in C. Wall Sur....T.D. 2,500 ft.; drlg.
Sal Mar Oil Corp.'s No. 1 F. A. Pfuilman, 150 ft. from W line, 1,050 ft. from N line of tract in Lewis Bollinger Sur. .....Moving in rig.
Taylor Oil Co.'s No. 1 Pearson, S of Kingsbury.....Spudded in.

GOLIAD COUNTY

Hoffman & Gooch's No. 1 Fromme, 600 ft. from N and 1,200 ft. from W line of Peter B. Dexter Sur. .....T.D. 2,590 ft.; drlg.
Humble Oil & Ref. Co.'s No. 1 Fromme, 450 ft. from S line, 150 ft. from W line of lease on Geo. Kersey Sur..Rigged up.
Plymouth Oil Co.'s No. 2 Parks, 400 ft. S of No. 1 Parks in Solomon Parks Sur. .....T.D. 3,625 ft.; drlg.
Neal et al's No. 1 J. M. Pettus, 10,700 ft. to S line, 2,500 ft. to E line of Pedro Trevino Sur. .....T.D. 4,565 ft.; standing

GONZALES COUNTY

Crowder Oil Co.'s No. 1 Preston, 1,000 ft. from W line, 2,000 ft. from N line of W. W. Pace Sur. .....T.D. 200 ft.; standing.
Edmiston & Kirby Petroleum Co.'s No. 1 J. W. Ward, Jr., 200 ft. from N and W lines of tract in Dan McKay Sur. .....T.D. 150 ft.; drlg.
Johnson & Mattock's No. 1 J. James, 12 miles NE of Gonzales city, 900 varas from E line, 300 ft. from S line of tract in M. A. Williams Sur. .....T.D. 545 ft.; standing.
Nassamer, Gordon & Waldrop's No. 1 B. Botts, 2,500 ft. from E line, 650 ft. from S line in Sec. 6, Blk. 56, Gonzales Sur. .....T.D. 950 ft.; standing.

HIDALGO COUNTY

Barrett-Kanellos' No. 1 J. B. Brock, 7 miles W and N from Mission (on Monte Cristo road) .....T.D. 4,010 ft.; S.D.
San Roman Oil Co.'s No. 1 J. T. Lomax, 7,500 ft. from S and E lines of San Roman Sur. .....T.D. 2,500 ft.; S.D.
Dayle L. Smith's No. 3 Daskam, SW part of county.....T.D. 1,510 ft.; drlg.

JIM HOGG COUNTY

Clark & Cowden's No. 1 E. Vela, Share 1 El Peyote grant. Rigging up.
L. W. Connor's No. 1 Holbien, 150 ft. from N and E lines of Blk. 7, Sur. 7, Holbien Subd. of Las Animas grant .....T.D. 2,525 ft.; abnd.
D. C. DeWitt's No. 1 Gomez, 1,170 ft. from N line, 150 ft. from W line of Sur. No. 12, SW part of county ..T.D. 1,280 ft.; drlg.
Duval Oil Co.'s No. 1 W. W. Jones, 1,020 ft. from S and W lines of 160-ac. tract in Holden Subd. of Share 5-A in San Diego Hinajosa grant .....Location.
T. P. Morgan's No. 1 fee, 2,223 ft. to N line, 1,640 ft. to E line of Share 19, Palo Blanco grant .....T.D. 4,207 ft.; standing

JIM WELLS COUNTY

F. A. Lain's No. 1 Vernon Porter, 800 ft. from S line, 400 ft. from W line of 200-ac. tract in Sur. 25 .....Set surface csg.
Vacuum Oil Co.'s No. 1 Seeligson, 4,500 ft. to W line, 75,000 ft. to S line of Los Jaboncillos Sur. .....T.D. 5,500 ft.; drlg.

KARNES COUNTY

A. E. Edmiston's No. 1 O. L. Cochran, 150 ft. from S line, 500 ft. from E line of farm in D. B. McConnell Sur. .....T.D. 1,820 ft.; standing.
Nichols Oil Co.'s No. 1 Newberry .....T.D. 3,040 ft.; drlg.
Pickett et al's No. 1 D. E. Lyons in Victor Blanco Sur.....Rigging up.

KENDALL COUNTY

Dixon Oil Co.'s No. 1 Ottmar Behr, 823 ft. from S and N lines of Jessie Wilson Sur., 3 miles S of Sisterdale .....T.D. 2,708 ft; standing.
Fred S. Dibble's No. 1 Ellenbrach, Sur. 77, N part of county .....T.D. 50 ft; S.D.

KERR COUNTY

Geo. Ball's No. 1 F. A. Karger, 3 miles N of Kerville..Rig on ground.
Evans & Gant's No. 1 E. Young, A. E. Burg Sur. 28....T.D. 1,312 ft.; standing
Evans & Gant's No. 3 Love, 600 ft. E of No. 1 Love in J. Martinez Sur. No. 1,594 .....Location.
Verde O. & G. Co.'s No. 1 J. D. Witt, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 1,923, Hamilton Sur., 4 miles from Center Point; T.D. 200 ft; carried to this depth and abandoned as Herber Oil Co.'s No. 1 J. D. Witt .....T.D. 110 ft.; standing.

KLEBERG COUNTY

H. Carter et al's No. 1 R. H. Simmons, in Sec. 7, King Sur. No. 3 .....T.D. 3,205 ft.; standing.

LIVE OAK COUNTY

Catlett & O'Neill's No. 1 H. D. Miller, 2,400 ft. from SW line, 6,125 ft. from NW line of Miller ranch in SE part of county .....Location.
J. A. Harper's No. 1 fee, 2,130 ft. to N line, 510 ft. to E line of farm, J. Pointevant Sur. 37 .....Spudded in and standing.
Henderson Coquat's No. 1 Hewitt, 250 ft. from N and E lines of SW of Sec. 5, Thomas Adams Sur. .....T.D. 1,785 ft.; S.D.

LEE COUNTY

Washington-Lee Oil Co.'s No. 1 Hicket, 1,100 ft. from N line, 200 ft. from E line of tract in J. D. Varreiman Sur. .....Location.

McMULLEN COUNTY

Jacob Buzzini & Pickett's No. 2 Jacob, 150 ft. NW of No. 1 Jacob .....T.D. 962 ft.; comp. 75 bbls.

MEDINA COUNTY

Robertson Drilling Co.'s No. 1 Little, 2,350 ft. from N line, 1,500 ft. from E line of E. B. Rutledge Sur., southern part of county .....Spudded in.

MILAM COUNTY

Birdwell et al's No. 1 E. and J. S. Williams, 150 ft. from N and E lines of 46-ac. tr. in Samuel P. Carson Sur., 5 miles SW of Rockdale ..... Spudded in.
H. W. Elliott's No. 1 Marek, 767 ft. from N line, 500 ft. from W line of 160-ac. tr. in B. Wickson Sur. ..... T.D. 3,000 ft.; S.D.

NUECES COUNTY

C. E. McCarthy's No. 1, W of Corpus Christi ..... Making location.

REAL COUNTY

McGinley Corp.'s No. 1 Haby, C of SW, Sec. 175 ..... T.D. 2,530 ft.; standing.

SAN PATRICIO COUNTY

John F. Camp's No. 1 Jackson, SW cor. SW, Sec. 30, 3 miles from Edroy ..... T.D. 5,250 ft.; drlg.

STARR COUNTY

Coastal O. & G. Co.'s No. 1 Kelsey-Bass, 448 ft. to N line, 150 ft. to W line of Tract 52, Sur. 2, Porcion 86.. T.D. 396 ft.; drlg.
Davenport et al's No. 1 Wells, 30 miles W of Mission .. T.D. 1,093 ft., csg. stuck.
O. W. Killam's No. 1 Wood, south end Porcion 84, SE of Rio Grande City ..... T.D. 1,500 ft.; drlg.
Frank LaBorde's No. 1 Juan Marroquin, 1,250 ft. from E line, 1,225 ft. from S line of Share 21 of W two-thirds of Porcion 75 ..... T.D. 150 ft.; drlg.
Strynalls Oil Corp.'s No. 1 M. E. Salinas, 155 ft. from N and W lines of lease in Porcion 80, Share 38 .... T.D. 1,895 ft.; drlg.
Strayhorn Oil Co.'s No. 1 Caffarelli, Porcion 80 ..... Location.
R. B. Suttle's No. 1 Guerra, 2,000 ft. to N line, 270 ft. to W line of Porcion 110 ..... T.D. 810 ft.; no report.
Jack Tarver's No. 1 Guerra, NE of Rio Grande City .... T.D. 856 ft.; changing to rotary
Jess Williams' No. 1 Welch, 1,120 ft. to W line, 1,500 ft. to N line of tr. in Pedernal grant ..... T.D. 840 ft.; drlg.

TRAVIS COUNTY

C. R. Franklin et al's No. 1 J. Wilson, 160 ft. from N and W lines of farm in A. Alexander Sur. ..... T.D. 1,210 ft.; S.D.
Ray & Henze's No. 1 Hatech, in C of tr. in S. Hamilton Sur. ..... T.D. 900 ft.; S.D.
Ray & Orth's No. 1 Lundgren, 550 ft. from N line, 150 ft. from W line of 133-ac. tr. in L. Kimbro Sur. .... Spudded in and S.D.

WEBB COUNTY

Norden & Morris' No. 1 Gates, 160 ft. from E line, 50 ft. from S line of Blk. 5, Sur. 19 ..... T.D. 2,006 ft.; abnd.
Power & Dettenhalm's No. 1 Cowan & Goss, 1,870 ft. from W line, 1,656 ft. from N line of Sur. 1,606 .... T.D. 405 ft.; standing.
Phillips Rosenberg's No. 2 Laurel, 150 ft. from N and W lines of Blk. 8, Sur. 271 ..... T.D. 1,500 ft.; drlg.

WILLIAMSON COUNTY

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tr. in B. Manlove Sur. ..... Rigging up.
McNeill & Matthews' No. 1 Bachmayer, 300 ft. from E line, 150 ft. from S line of C. C. Browning Sur. ... Location.
G. B. Peterman's No. 1 Guentzel, 300 ft. from SE line, 867 ft. from SW line of tract in H. Cooks Sur. ..... Location.
G. L. Rowsey's No. 1 Streit, 450 ft. from SW line, 150 ft. from NW line of tract in J. West Sur. ..... Location.

ZAPATA COUNTY

Ballard & Mercer's No. 1 Flores, 500 ft. from NE line, 580 ft. from SE line of Blk. 27, Porcion 37 ..... T.D. 2,497 ft.; set csg.
George Ball's No. 1 Gutierrez, in Charco Redondo grant, taken over from Moore et al to deepen ..... T.D. 2,065 ft.; drlg.
Joe Cullinan's No. 1 E. Gutierrez, 1,992 ft. from NE line, 2,303 ft. from SE line of Charco de la India grant ..... T.D. 40 ft.; set surface csg.
O. W. Killam's No. 1 Barrocito Ranch in J. V. Borrego Sur. ..... T.D. 1,962 ft.; drlg.
Major Co.'s No. 1 Benavides, 150 ft. from NW and SW lines of Sur. 12, NE part of county ..... T.D. 1,504 ft.; abnd.

ZAVALLA COUNTY

Carpenter & Jenkins et al's No. 1 John Wolf, Sec. 8, Abstract 1,199 ..... T.D. 757 ft.; resumed drlg.

SOUTHWEST TEXAS PROVEN AREAS

Week Ending April 29

SCHIMMEL POOL—BASTROP COUNTY

Schimmel & Batts' No. 3 Williams, 3,550 ft. from SE line, 150 ft. from NE line of James Doyle Sur. ..... T.D. 1,780 ft.; abnd. dry.

COSDEN POOL—BEE COUNTY

Henderson Coquat's No. 1 Leroy Roberts, 300 ft. from W line of lease, 300 ft. N of NE cor. of Gremmel tract ..... Rigging up.

NORMANN POOL—BEE COUNTY

Gulf Coast Oil Co.'s No. 1 Hicks, 300 ft. S of Nichols Oil Co.'s No. 1 Hicks ..... T.D. 4,250 ft.; coring.

PETTUS POOL—BEE COUNTY

The Texas Company's No. 4 Gremmel, 450 ft. W of No. 3 Gremmel in (south) John Pace Sur. ..... Moving in rig.
United Prod. Co.'s No. 40 Ray, 2,990 ft. SE along the SW line of T. Thomas Hanson Sur. from SW cor. thence 2,346 ft. NE at right angles ..... T.D. 3,953 ft.; comp. 75 bbls.
United Prod. Co.'s No. 41 Ray, in Geo. A. Kerr Sur., 660 ft. NE of No. 33 Ray and 660 ft. SW of No. 31 Ray ..... T.D. 3,953 ft.; comp. 110 bbls.

COOKSEY POOL—BEXAR COUNTY

Chiquita Oil Co.'s No. 3 Pollock, 330 ft. from S line and N offset to Chiquitas No. 1 Hunter in J. W. Rialls Sur. ..... Rigging up.
L. W. Stieren's No. 1 Annis Terrell, 150 ft. from N and E lines of lease in J. Martinez Sur. ..... T.D. 1,100 ft.; drlg.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 3 J. H. Gambler, 180 ft. from N and E lines of tr. in A. Manachaca Sur. 51.. T.D. 1,216 ft.; drlg.
F. H. Eckert & Son's No. 1 Louis Brehm, W offset to No. 3 John J. Brehm ..... Location.
F. H. Eckert & Son's No. 10 Sandemer, 400 ft. E of No. 9 ..... T.D. 310 ft.; drlg.
Gatlin Oil Co.'s No. 11 I. A. Beck, 700 ft. from SE line, 156 ft. from SW line of tr. in J. Montes Sur. .. T.D. 495 ft.; drlg.
Gatlin Oil Co.'s No. 11 I. A. Beck, 700 ft. from SE line, 156 ft. from SW line of tr, in J. Montes Sur. .. T.D. 495 ft.; drlg.
W. K. Oil & Gas Co.'s No. 4 Strunk, 300 ft. E of No. 3 Strunk ..... T.D. 700 ft.; set csg.

GAS RIDGE—BEXAR COUNTY

American Gas Co.'s No. 1 W. H. Kennon, 1,750 ft. from S line, 2,000 ft. from E line of 400-acre tract in Maria F. Rodriges Sur. ..... Spudded in.

SALT FLATS POOL—CALDWELL COUNTY

John Storey's No. 1 Dickerson, 150 ft. to N of center of S line of tr., John R. Rains Sur. ..... Rigging up.

COLE POOL—DUVAL COUNTY

Cole Pet. Co.'s No. 75 Benavides, 365 ft. from NE line, 150 ft. from NW line, Blk. 8, Sec. 18, Mariana Arispe grant ..... T.D. 4,820 ft.; coring.

GOVERNMENT WELLS—DUVAL COUNTY

Duval Oil Corp.'s No. 9 Bishop Cattle Co., 2,216 ft. to W line, 2,221 ft. to N line of Sur. No. 135 ..... Location.

SLICK POOL—GOLIAD COUNTY

T. B. Slick estate's No. 2 Allen, 1,660 ft. from NE line, 330 ft. from NW line of tr. in Obid Marshall Sur. . T.D. 4,211 ft.; set csg.

DARST CREEK POOL—GUADALUPE COUNTY

John R. Camp's No. 2 Sue Denman, 300 ft. S and 300 ft. W of No. 1 Sue Denman ..... T.D. 2,490 ft.; comp. 600 bbls.
Humble Oil & Ref. Co.'s No. 5-C Sue Denman, 525 ft. from E line, 600 ft. N of No. 4-C, Wm. Arrington Sur. ..... Derrick.

CHITTIM POOL—MAVERICK COUNTY

Texas Gas Utilities' No. 8 Chittim, 24 ft. S of No. 7 Chittim ..... T.D. 5,100 ft.; standing.

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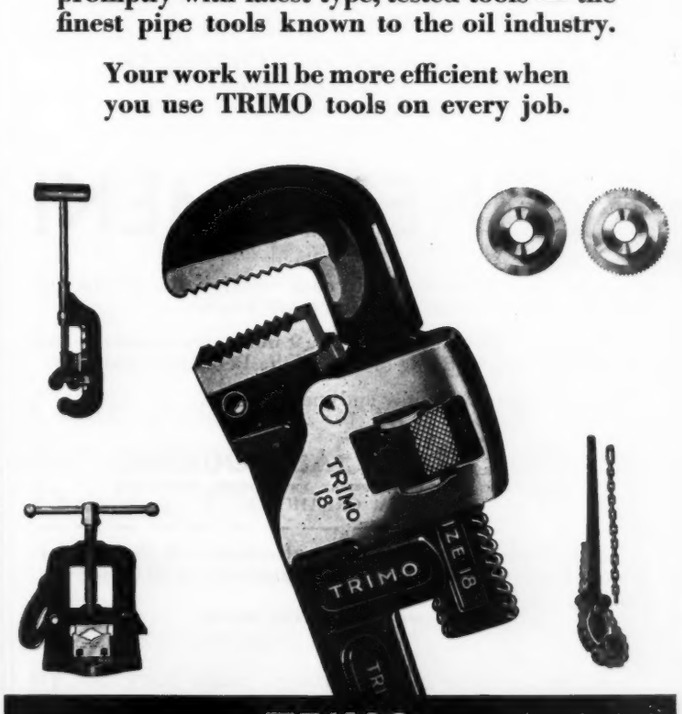

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SAXET FIELD—NUECES COUNTY

Gulf Coast Oil Co.'s No. 1 Perkins and LeGasse, 330 ft. from N and E lines of 245-ac. tr., Sec. 26, Shepard Subd. ..... T.D. 4,250 ft.; drlg.
Kepley et al's No. 1 Speer and Hocker, 200 ft. from E and S lines of 850-ac. tr., in Speer and Driscoll lands ..... Spudded in.
Rutherford Drlg. Co.'s No. 1 Hunter, 150 ft. from S and W lines of 10-ac. tr. ..... T.D. 2,690 ft.; drlg.
Saxet Oil Co.'s No. 5 Well, 3,041 ft. to N line, 333 ft. to W line ..... T.D. 2,500 ft.; standing.

ARANSAS POOL—SAN PATRICIO COUNTY

Atlantic Oil Prod. Co., to deepen to 6,000 ft. the Welder Oil Corp.'s No. 3 Welder ..... T.D. 5,280 ft.; drlg.

WHITE POINT—SAN PATRICIO COUNTY

United Prod. Co.'s No. 3 Cage ..... T.D. 4,925 ft.; drlg.

LOS OLMOS POOL—STARR COUNTY

Bennett O. & G. Co.'s No. 1 Seabury et al, Porcion 75.... Moving in.
Kirk Cornell's No. 1 Kelsey Bass, 150 ft. from N line, 1,306 ft. from W line of NW NW Section 8, Subd. of Porcions 75, 76, 77 ..... Location.
H. H. Davis' No. 5 Kelsey Bass, 450 ft. from N and E lines of SW NW Sur. 6, Porcions 75, 76, 77 ..... T.D. 468 ft.; comp. 10 bbls.
H. H. Davis' No. 6 Kelsey Bass, 20 ft. from E line, 600 ft. from N line of SW NW Section 6, Subd. of Porcions 75, 76, 77 ..... Spudded in.
Day & Co.'s No. 1 Kelsey Bass, 150 ft. from S line, 400 ft. from W line of W 20 acres of NE NW of Sec. 6, Subd. of Porcions 75, 76, 77 ..... Moving in rig.
Felder, Mitchell & Barnsley's No. 1 Kelsey-Bass, in Sur. 8, Subd. of Porcions 75, 76 and 77 ..... T.D. 320 ft.; drlg.
Griffin et al's No. 1 Bass, 150 ft. from N and W lines of NW NW Sur. 11, Subd. Porcions 75, 76, 77 ..... Derrick.
R. A. Hoffman's No. 1 Goodrich, 150 ft. from N and W lines of Blk. 6, Tract 5, Porcion No. 81 ..... Location.
Hooks & Weaver's No. 6 Kelsey Bass, 150 ft. from N and E lines of NE SW Sec. 6, Subd. of Porcions 75, 76, 77 ..... T.D. 468 ft.; set csg.
Hunter & Eakles' No. 1 Kelsey Bass, 350 ft. from N and W lines of NE SE Sec. 8, of Porcions 75, 76, 77..... T.D. 450 ft.; drlg.
M. A. Landrum's No. 2 Kelsey-Bass, 519 ft. from S line, 150 ft. from E line of Sur. 6, Porcions 75, 76 and 77 ..... Location.
M. A. Landrum's No. 1 A. K. Bass, Sec. 6, 150 ft. to S and E lines of lease ..... Location.
Los Olmos Oil & Gas Co.'s No. 12 Kelsey Bass, 546 ft. from W line, 150 ft. from N line of SE SW Sec. 8, Porcions 75, 76, 77 ..... T.D. 446 ft.; standing.
Tom C. Patton's No. 1 Kelsey-Bass, 150 ft. to W line, 150 ft. to S line of 20-ac. tract in NW NE of Subd. 8 of Porcions 75, 76 and 77 ..... T.D. 150 ft.; drlg.
Quien Sabe Oil Co.'s No. 1 Kelsey Bass, 300 ft. from N line, 750 ft. from W line of NE SW Section 8, Porciones 75, 76, 77 ..... Location.
Rio O. & G. Co.'s No. 3 Kelsey-Bass, No. 6 Subd., Porcions 75, 76 and 77 ..... T.D. 569 ft.; standing.

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Sinclair & Rutherford's No. 1 Kelsey Bass, 150 ft. from S and W lines of SE NW Sec. 6, Subd. of Porcions 75, 76, 77 ..... Rigging up.
Tarver & Nance's No. 4 Kelsey Bass, 450 ft. from N line, 600 ft. from W line of lease in Sur. 7, Porcions 75, 76, 77 ..... T.D. 455 ft.; set csg.

AVIATOR FIELD—WEBB COUNTY

Ross Amigos' No. 1 E. Garcia, 450 ft. from N and E lines of Blk. 46, Sur. 592, Los Ojuelos grant ..... T.D. 1,200 ft.; drlg.

WEST COLE POOL—WEBB COUNTY

French Oil Corp.'s No. 7 Benavides, 2,310 ft. from N line, 150 ft. from W line of Sur. 659 ..... T.D. 2,330 ft.; set csg.
French Oil Corp.'s No. 4-A Benavides, 2,640 ft. from N line, 150 ft. from W line of Sur. 659 ..... Location.
Magnolia Petroleum Co.'s No. 7 Benavides, 2,490 ft. from N line, 200 ft. from E line of Sur. No. 660..... Location.

ANDREWS POOL—ZAPATA COUNTY

The Major Co.'s No. 1 Benavides, 150 ft. from NW and SW lines of Sur. 12 ..... T.D. 1,504 ft.; tested oil and salt water.

ESCOBAS POOL—ZAPATA COUNTY

E. K. Bateman's No. 1 M. Garza Estate, 150 ft. to NE and SE lines of Douglas Subd. of Comitas grant ..... Location.
E. R. Black & Paul S. Williams' No. 1 Comitas grant, 150 ft. from NW and NE lines of Blk. 100 ..... Derrick.
F. M. Blair & Son's No. 1 Montemayor, 450 ft. to N, 150 ft. to E line of Blk. No. 1, Sur. 63 ..... T.D. 1,390 ft.; drlg.
O. W. Killam's No. 6 Medina, 830 ft. from NE line, 325 ft. from SE line of Share 34, Comitas grant ..... T.D. 1,450 ft.; drlg.
W. M. Lee's No. 1 I. G. Trevino, 150 ft. from S and W lines of Blk. 7, Sur. No. 66 ..... T.D. 1,450 ft.; recemented csg.
McGinley Corp.'s No. 2 G. T. Montemayor, 150 ft. from S and E lines of Blk. 2, Sur. 64 ..... T.D. 1,200 ft.; drlg.
McGinley Corp.'s No. 1 Jose Bustamente, 1,200 ft. to NE line, 150 ft. to NW line of 105.7-acre Henne, Winch & Fariss tract, Share 35, Comitas grant ..... Rigging up.
McGinley Oil Corp., No. 1 G. T. Montemayor, 150 ft. from N and W lines of Blk. 6, Sur. 64 ..... Location.
The Texas Co.'s No. 8 Measles, 16,757 ft. from W line, 150 ft. from SE line of Cerrito Blanco grant ..... Rigging up.
Trevino Oil Corp.'s No. 15 I. G. Trevino, 262 ft. from E line, 326 ft. from S line of Blk. 15, Sur. 412 ..... T.D. 1,250 ft.; coring.

CHARCO-REDONDO POOL—ZAPATA COUNTY

Bob & Richey's No. 29 Martinez, 810 ft. from SW line, 360 ft. from SE line of Blk. 24, W. R. Duke Subd., Charco Redondo grant ..... Location.
Petroleum Royalty Corp.'s No. 1 Pablo Trevino, 2,922 ft. from SW line, 957 ft. from NW line of 1,066-ac. tract in Charco Redondo grant ..... T.D. 213 ft.; abnd.

GULF COAST FIELDS AND WILDCATS

(Continued from Page 60)

Gulf Prod. Co. and Humble Oil & Ref. Co.'s No. 3 Booth-Meyers, John Rabb Sur., 1,500 ft. E of No. 2.. Derrick.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 1 Hampil (D.D.), Robt. Peebles Sur., 350 ft. S, 975 ft. E, SW cor. A. P. George 619-ac. tract..... Working over 5,412 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 3 Lockwood, John Rabb Sur., 1,000 ft. due E of No. 2 .... Drlg. sticky shale 4,405 ft.
Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 2-B Lockwood & Sharp, John Rabb Sur., 816 ft. W of No. 1-B ..... Drlg. sandy shale 3,986 ft.
The Texas Co.'s No. 1 Wolters (M. H. Gubbels), Samuel Kennedy Sur., 742 ft. from W line, 100 ft. from S line of 100-ac. tract ..... Derrick.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 26 Cade, N. Fitzsimmons Sur., 600 ft. S of No. 24 ..... Set 37 ft. of 5-in. screen 5,331 ft.; 4 jts. liner and 2½-in. tubing to top; comp. flowing 932 bbls. P.L. oil daily, 360 lbs. pressure, ¾-in. choke.
Yount Lee Oil Co.'s No. 27 Cade, N. Fitzsimmons Sur., 600 ft. N of No. 21 in line with Nos. 22 and 23 ..... Drlg. hard sand and lime 5,224 ft.
Yount Lee Oil Co.'s No. 1 Broussard & Orme, 300 ft. E of N cor. of N. Fitzsimmons Sur., in Martin Dunman Sur. ..... Drlg. water sand 5,590 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 134-A "C" ..... T.D. 555 ft.; comp. pumping 20 bbls. net oil.
Rio Bravo Oil Co.'s No. 135-A Cotton..... Drlg. sand 236 ft.

HUMBLE—HARRIS COUNTY

Cullen & West's No. 4 Burt, J. B. Stevenson Sur., 50 ft. NW of No. 3 in line with No. 2 ..... Rig.
J. D. Clay's No. 1 Bender, Robert Dunman Sur., 200 ft. from W line and 100 ft. from S line of 100-acre tract ..... Spudded.
Rio Bravo Oil Co.'s No. 7 fee (W.O.), 216 ft. W line, 50 ft. S line, 22-ac. tract, Bender South Addn., Adams Sur. ..... Set screen 4,178 ft.
Sun Oil Co.'s No. 52 River, Robt. Dunman Sur. ..... Set 8-in. csg. and one jt. screen (one string) 1,477 ft.
Sun Oil Co.'s No. 51 River, Robert Dunman Sur., 130 ft. S of No. 50 ..... Rigging up to pump 1,406 ft.
The Texas Company's No. 24 W.&P. fee, J. B. Stevenson Sur., 50 ft. from W line and 50 ft. from S line... Drlg. sand and shale 1,343 ft.

PIERCE JUNCTION—HARRIS COUNTY

Abercrombie & Harrison's No. 2 Ritter (D.D.), Jas. Hamilton Sur. No. 51 ..... T.D. 4,263 ft.; to sidetrack.
Anderson & Plummer's No. 7 Whitehead, Jas. Hamilton Sur. No. 51, 248 ft. S of No. 4 and 304 ft. from E line ..... Set screen 2,895 ft.
Navarro Oil Co.'s No. 3-A Cain (W.O.), Jas. Hamilton Sur. No. 98; 75 ft. from S line and 50 ft. from W line of "A" lease ..... Set 30 ft. of 4½-in. screen 4,563 ft.; swabbed some oil and salt water.
Pure Oil Co.-Moody Receiver's No. 3 Herman, Jas. Kopman Sur., 200 ft. due W of C of E line of 25-acre tract ..... T.D. 4,561 ft.; sand showing oil 4,518-59 ft.; cmtd. 6⅝-in. csg. 4,509 ft.
Rio Bravo Oil Co.'s No. 7-A Settegast (D.D.), Jos. Kopman Sur. No. 44, 1,400 ft. NW along NE line from SE cor. "A" lease and 100 ft. SW at right angles... Coring sand 4,409 ft.
Rio Bravo Oil Co.'s No. 24-A Settegast, J. Kopman Sur. No. 44, 1,900 ft. S and 200 ft. W of NE cor. of "A" lease ..... Set 49 ft. of 4½-in. screen 4,292 ft.; tested salt water; pulling screen to deepen.
Rio Bravo Oil Co.'s No. 25-A Settegast, J. Kopman Sur. No. 44 (location check to come) ..... Derrick.

MOSS BLUFF—LIBERTY COUNTY

Humble Oil & Ref. Co.'s No. 10 Sterling, Jas. McFaddin Sur., 450 ft. S of No. 9 ..... Abnd. in cap rock 1,754 ft.

MYKAWA—HARRIS COUNTY

F. R. Flannigan et al's No. 2 Minnetex, 125 ft. from W line and 100 ft. from S line, Lot 251, Wm. J. Lovett Sur. ..... 12-in. csg. 750 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 20 Esperson, C. W. Fisher Sur., 471 ft. from W line and 510 ft. N of No. 5 Esperson ..... Drlg. water sand 4,183 ft.

Cranfill-Reynolds Co.'s No. 5 Davis (D.D.), Kokernut Sur., 150 ft. from S line, 1,197 ft. from E line of tract ..... Pulled screen to deepen 2,285 ft.
Cranfill-Reynolds Co.'s No. 9 Moore's Bluff, M. Duncan Sur., 500 ft. S of N line of Moore's Bluff tract in line with No. 6 Davis and No. 6 Moore's Bluff ..... Location.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 15 Boyt, H.&T.C. Sur. No. 22, 500 ft. E and 500 ft. S of No. 12 ..... Set 1 jt. screen 4,400 ft.; comp. flowing 1,500 bbls. P.L. oil ½-in. choke.

SOUTH LIBERTY—LIBERTY COUNTY

The Texas Company's No. 2 Pickett (D.D.), M. G. White Sur., 350 ft. W and 62 ft. S from NE cor. of 12.2-acre tract ..... Rig up to deepen 3,536 ft.

HULL—LIBERTY COUNTY

Bashara Oil Co.'s No. 1 Hannah, Jesse DeVore Sur., 100 ft. W of The Texas Co.'s No. 1 Hannah ..... Derrick.
D. & L. Prod. Co. and Bashara Oil Co.'s No. 1 Pevito, Jesse Devore Sur., 34½ ft. from E line and 30 ft. from N line of 5-acre strip ..... No report.
Republic Prod. Co.'s No. 63-A Dolbear, Jesse Devore Sur., 50 ft. NW of No. 63 in line with No. 61 ..... Sand showing oil and gas 2,368-97 ft.; cmtd. 6⅝-in. csg. 2,365 ft.

MARKHAM—MATAGORDA COUNTY

Claude Hamill et al's No. 2 Northern Irrigation Co., I.&G.N. Sur., Blk. 9, Sec. 5, 50 ft. NW of No. 1 ..... Drlg. shale and boulders 2,012 ft.
Powers Prod. Co. and Hamill & Hamill's No. 2 N. R. Meyers (18-ac. tract), Wm. Hadden Sur., 240 ft. E of No. 1 ..... T.D. 3,200 ft.; pulled in derrick.
The Texas Company's No. 1 Texas Pipe Line Co., Wm. Hadden Sur., Blk. 5, 50 ft. S and 50 ft. W of NE cor. of tract ..... Rigging up.
United North & South Oil Co.'s No. 1 McDonald, I.&G.N. Sur., Blk. 9, Sec. 5, 460 ft. S and 80 ft. E of NW cor. 35-acre tract ..... T.D. 3,698 ft.; plugged to sand at 3,577-81 ft; swbd. 10 bbls. daily; temp. abnd.

CLAY CREEK—WASHINGTON COUNTY

John Walker et al's No. 1 Henry Wendt, J. F. Perry Sur., 150 ft. from SW line and 405 ft. from SE line of tract ..... Location.

PORT NECHES—ORANGE COUNTY

The Texas Company's No. 1 Polk-Kuhn-Glass, 260 ft. E and 1,545 ft. S of SW cor. Marshall Beaucham Sur., in the T. J. Notgrass Sur. ..... Sand and shale 6,965 ft.; temp. shut down.
The Texas Co.'s No. 2 Kuhn (D.D.), 589 ft. W and 150 ft. S of NE cor. Mary E. Hall Sur. No. 2 ..... T.D. 4,412 ft.; plugged to 4,313 ft.; perforated csg. 4,302-97 ft.
The Texas Company's No. 3 Kuhn, 587 ft. S and 150 ft. W of NE cor. of the Mary E. Hall Sur. No. 2 ... Set 1 jt. 4⅝-in. screen 4,118 ft.; comp. flowing 67 bbls. hourly, 1.6 per cent b.s. and wash wtr., 1½-in. choke.

ORANGE—ORANGE COUNTY

Sun Oil Co.'s No. 1 Belile (D.D.) ..... Drlg. 3,875 ft.

REFUGIO—REFUGIO COUNTY

E. M. Jones' No. 1-B Mitchell (D.D.), 250 ft. NW of SE line and 250 ft. SW of Mission River ..... Cored sand and shale 8,550 ft.
Larco Gas Co.'s No. 5 Strauch, Refugio Town tract, Lot 6, Blk. 2, 100 ft. W of No. 2 ..... Drlg. 520 ft.
Moody-Seagraves Prod. Co.'s No. 2 O'Connor (W.O.),150 ft. from N line and 508 ft. from W line 62-acre tract ..... T.D. 6,454 ft.; plugged to 6,390 ft.
Pearson Properties' No. 2 Ryals (W.O.), 600 ft. from S line and 150 ft. from W line of lease ..... Drlg. shale and lime 6,496 ft.
United Prod. Corp.'s No. 3 W. J. Fox (D.D.), Wm. Hews & L. Brown Sur., 2,099 ft. NE along SE line from SE cor. of lease, thence 1,690 ft. NW at right angles ..... Drlg. sandy shale 6,676 ft.
United Prod. Corp.'s No. 4 W. J. Fox, 2,600 ft. NE along SE line from SE cor. of Wm. Hews and L. Brown Sur, thence 1,420 ft. NW at right angles ... Drlg. sandy shale 6,211 ft.
United Prod. Corp.'s No. 5 W. J. Fox, 2,150 ft. NE along SE line from SE cor. of Wm. Hews and L. Brown Sur., and thence 890 ft. NW at right angles ..... Drlg. sticky shale 6,200 ft.

SOUTH LOUISIANA FIELDS

JENNINGS—ACADIA PARISH

Russell Campbell's No. 3 Syndicate (D.D.), 475 ft. S and 350 ft. W of NE cor. Sec. 41-9s-2w ..... Drlg. sandy shale 2,375 ft.
Heywood & Heywood's No. 2 Jennings fee simple, 50 ft. N of SE cor. and 15 ft. W of E line of Lot 9, Sec. 46-9s-2w ..... Drlg. gumbo 1,795 ft.
Kathleen Oil Co.'s No. 1 Syndicate fee (W.O.), Sec. 46-9s-2w ..... Twisted off 4,025 ft; trying to sidetrack.
Reliable Oil Co.'s No. 2 Rawson (D.D.) ..... Drlg. gumbo 1,428 ft.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Shell Petroleum Corp.'s No. 2 Heyd, 225 ft. out of NE cor. of Sec. 13-9s-7w ..... Sand showing oil 6,972-79 ft.; cmtd. 7-in. csg. 6,972 ft.; drlg. plug.
Shell Petroleum Corp.'s No. 1 Fontenot, Sec. 7-9s-6w, 450 ft. due E No. 2 Heyd ..... Drlg. sandy shale 6,792 ft.

EDGERLY—CALCASIEU PARISH

C. M. Crotty Oil Co.'s No. 7 Lillard (W.O.) ..... T.D. 2,530 ft.; pulling screen to deepen.
Emerson & Moore's No. 1-B Hunter, Sec. 21-9s-11w, 265 ft. SE of No. 10 ..... Drlg. shale 3,995 ft.

SULPHUR—CALCASIEU PARISH

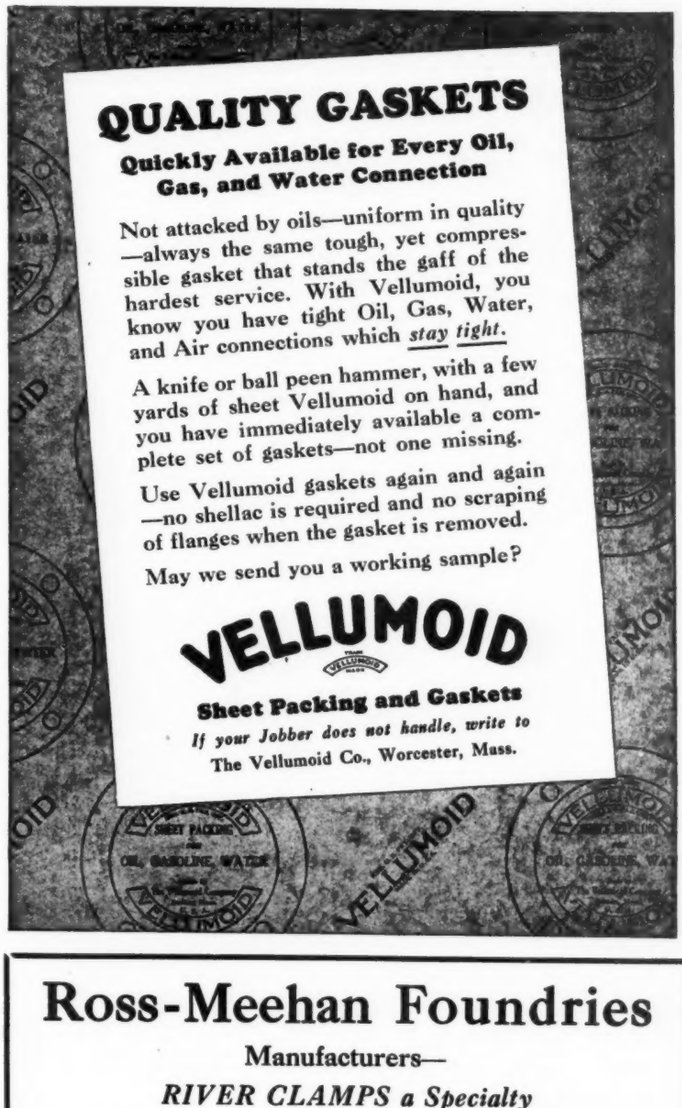
Union Sulphur Co.'s No. 752 fee (D.D.), 497 ft. W and 185 ft. S of center of Sec. 29-9s-10w ..... Drlg. sandy shale and lime 3,620 ft.
Union Sulphur Co.'s No. 769 fee, 295 ft. S, 918 ft. W of C of Sec. 29-9s-10w ..... Sand and shale showing oil at 4,990 ft.
Union Sulphur Co.'s No. 770 fee, 292 ft. S, 1,243 ft. W of center, Sec. 29-9s-10w ..... Location.
Union Sulphur Co.'s No. 771 fee, 431 ft. S, 340 ft. W of center, Sec. 29-9s-10w ..... Drlg. gumbo 2,105 ft.
Union Sulphur Co.'s No. 772 fee, 145 ft. S, 882 ft. W of center, Sec. 29-9s-10w ..... Location.

VINTON—CALCASIEU PARISH

Marrs McLean's No. 13 Gray, 464 ft. E and 460 ft. S of C of Sec. 30-10s-12w ..... Cored sand 1,790 ft.
Vinton Petroleum Co.'s No. 1 Matilda Gray (20 acres), 48 ft. N and 89 ft. W of SE cor. SW NE of Sec. 23-10s-12w (D.D.) ..... T.D. 3,214 ft.; sidetracked second time 2,875-2,978 ft.; set. 10 ft. screen; tested S.W.; standing.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 8 Dorion, 1,280 ft. S and 792 ft. E of NW cor. Sec. 24-12s-10w ..... Rock showing oil 2,853-72 ft.; to test.
Calcasieu Oil Co.'s No. 17 Watkins (D.D.), 2,088 ft. E, 162 ft. S, NW cor., Sec. 24-12s-10w ..... Rig up to deepen; 2,712 ft.
Calcasieu Oil Co.'s No. 33 Watkins, 1,466 ft. E and 3,841 ft. N of SW cor. Lot 9, Secs. 37, 38 and 39, in Sec. 24-12s-10w ..... Broken lime rock 2,782 ft.; killed gas well.
R. E. Siess' No. 2 Vincent (D.D.), 2,395 ft. S, 1,355 ft. W, NE cor., Sec. 30-12s-10w ..... Sand showing oil 2,484 ft.
J. G. Sutton's No. 6 Irwin, 1,320 ft. N and 1,845 ft. W of SE cor. of Sec. 13-12s-10w ..... Sand showing oil 3,040-46 ft.; set screen.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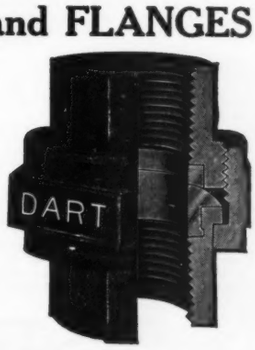

E. M. Dart Mfg. Co., Providence, R. I.
The Fairbanks Co.,—Distributors

Union Sulphur Co.'s No. 1 Gulf land (Pure Oil Co. lease), 1,420 ft. N, 400 ft. W of SE cor. Sec. 11-12s-10w ..... Drlg. rock 6,365 ft.
Yount Lee Oil Co.'s No. 28 State, 850 ft. E, 600 ft. S of NW cor. Sec. 24-12s-10w ..... Broken lime rock showing oil at 2,742-54 ft.; drlg. plug to test.
Yount Lee Oil Co.'s No. 50 State, 600 ft. S, 700 ft. E of NW cor. of Sec. 24-12s-10w ..... Location.
Yount Lee Oil Co.'s No. 51 State, 545 ft. S, 560 ft. E of NW cor. of Sec. 24-12s-10w ..... Location.
Yount Lee Oil Co.'s No. 52 State, 495 ft. S, 420 ft. E of NW cor. of Sec. 24-12s-10w ..... Location.
Yount Lee Oil Co.'s No. 53 State, 445 ft. S, 275 ft. E of NW cor. of Sec. 24-12s-10w ..... Location.
Yount Lee Oil Co.'s No. 54 State, 978 ft. S and 435 ft. W of NE cor. of Sec. 23-12s-10w ..... Location.
Yount Lee Oil Co.'s No. 55 State, 995 ft. S and 585 ft. W of NE cor. of Sec. 23-12s-10w ..... Location.
Yount Lee Oil Co.'s No. 56 State, 1,000 ft. S and 660 ft. W of NE cor. of Sec. 23-12s-10w ..... Location.

STARKS—CALCASIEU PARISH

Gulf Refining Co.'s No. 30 Lutcher-Moore, Sec. 19-9s-12w, 300 ft. S of No. 16 and 300 ft. W of No. 20 .... Derrick.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 11 Yount Lee, Sec. 12-13s-8w, 800 ft. S 66 deg. 42 min. from No. 9 ..... Location.

LEESVILLE—LA FOURCHE PARISH

Pop Oil Co.'s No. 1 Esponge Vizer (D.D.), Sec. 26-21s-22e. ..... Sand and shale showing oil at 3,927-30 ft.

PORT BARRE—ST. LANDRY PARISH

W. A. Aggers' No. 1 Cochran, 250 ft. S and 250 ft. E of NW cor. of Fractional Sec. 21-6s-5e ..... Standing 3,461 ft.
The Texas Company's No. 11 Botney Bay, N 82 deg. 10 min. W 474 ft. from NE cor. of tract and N 7 deg. 50 min. E 105 ft. in Sec. 4-6s-5e ..... Sand 3,118-90 ft.; set 60 ft. 5 3/16 in. screen, 40 ft. of blank and 2½-in. tubing to top; comp. flowing 1,630 bbls. P.I. oil, 450 lbs. pressure, ¾-in. choke, 27.7 gravity.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

C. O. Farrington et al's No. 1 Jackson, Brookshire, S. F. Austin Sur. No. 10, 750 ft. NW of Empire Gas & Fuel Co.'s No. 1 Jackson and 250 ft. S of NW line ... Drlg. shale and lime 2,917 ft.
Grant & Baker's No. 1 Chesley, W. C. White Sur., 150 ft. from NW line and 150 ft. from SW line of 26-acre tract (northeast of Raccoon Bend Field) ..... Cmtd. 10-in. csg. 196 ft.; standing.
Mulvey & Conklin's No. 1 Trenchman, James Cummins Hacienda Sur., 1,244 ft. from S line and 274 ft. from W line of 32.25-acre tract ..... Clay 790 ft.
O'Hara Oil & Gas Co.'s No. 1 Nellius, J. C. Cummings Hacienda Sur., 650 ft. N of No. 1 Schroeder in 18-acre tract, north edge Mill Creek ..... Derrick.
Pomacal & Boletka's No. 1 Schebajsa, 320 ft. N, 75 deg. E of N cor. B. Dottery Sur., near center of SW line of S. F. Austin 4 League on west fork of Mill Creek.. Shut down 1,740 ft.
Taylor & Mitchell's No. 1 Schlecte, 1,850 ft. from SE line and 3,100 ft. from NE line of John Fitzgibbons Sur. ..... T.D. 3,052 ft.; sandy shale showing salt water and gas 2,993-52 ft.
Vogelpohl et al's No. 1 Trenchman, J. Cummings Hacienda Sur., 3191½ ft. from E line, 1,344 ft. from S line of 32¼-acre tract ..... Shut down 780 ft.

BRAZORIA COUNTY

John Deering's No. 1 C. W. Chapman, 294 ft. from S line and 104 ft. from E line of Lot 2, Andrew Robinson Sur. ..... Preparing to resume drlg. 1,514 ft.
J. R. Ingram's No. 2 Levitt, John Peake Sur., 75 ft. NW of No. 1 ..... Drlg. water sand 1,740 ft.
The Texas Company's No. 2 Belcher, Manvel (D.D.), 1,728 ft. southeasterly and 1,231 ft. southwesterly at right angles out of N cor. of lease, Harvey Little Sur. ..... T.D. 5,736 ft.; plugged to 5,685 ft.; comp. flowing 55 bbls. fluid, 28 per cent b.s. and water, ⅝-in. choke, 1,575 lbs. on casing and 625 lbs. on tubing.

BURLESON COUNTY

E. M. Gracey et al's No. 1 Bracey, J. Lastly Sur., 850 ft. from E cor. of P. Taylor 110 acres, SE along NE line of J. G. Houston 160 acres, thence 180 ft. at right angles in 3-acre tract ..... Location.
Marek & Son's No. 2 A. Marek, N. McFaddin Sur., 1,068 ft. N and 225 ft. W of SE cor. of tract ..... Standing 2,230 ft.
M. O. & T. Corp.'s No. 1 Rigers ..... Drlg. shale and lime 2,117 ft.
Sampson Oil & Gas Co.'s No. 1 Duckworth & Gilley, 100 ft. from S line and 100 ft. from W line of Blk. 8, P. Singleton Sur. ..... Cmtd. 10-in. csg. 30 ft.
J. E. Stubblefield et al's No. 1 Mitchell, A. T. Woolridge Sur., 81 ft. SW and 4,340 ft. SE of S cor. of Joseph Henson Sur. ..... Gumbo 600 ft; cmtd. 8¼-in. csg. 600 ft.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Nelson, I.&G.N. Sur., Sec. 43 ..... Cmtd. 10-in. csg. 680 ft.

FORT BEND COUNTY

O'Hara et al's No. 1 Brown, Pilant Lake, Wm. Barrett and Abner Harris Sur., 600 ft. out of SW cor. of Brown 600-acre tract ..... Drlg. hard sand 3,631 ft.
Naylor & DeCosta's No. 1 Naylor, 6,350 ft. N, 55 deg. E from SW cor. 653-acre tract in Christman Sur. ..... Cmtd. 12½-in. csg. 1,221 ft.; S.D.

GRIMES COUNTY

Barnett et al's No. 1 Dodd, Timothy Jones Sur., 230 ft. N. Cobb & Rasmussen's No. 1 Dodd ..... Rock 1,792 ft; S.D.
Rianjo Oil Co.'s No. 3 Cuthrell, Patrick B. O'Connor Sur., 150 ft. S, 10 deg. E of No. 2 ..... Shut down 1,150 ft.

HARDIN COUNTY

Votaw Oil Co.'s No. 1 Southwestern Lbr. Co., 150 varas W of C of E line of Mary K. Sherman Sur. ..... Derrick.

HARRIS COUNTY

T. V. Buckholve & Sons' No. 1 Miller, Arthur McCormick Sur. ..... Drlg. gumbo 550 ft.
Flanigan et al's No. 1 Woodburn, Genoa, August Whitlock Sur., 200 ft. out of NW cor. of tract ..... Location.
Shubert & Alexander's No. 1 Herman Hale, 1,058 varas E of NW cor. R. A. Hanks Sur., thence 790 varas S and thence 70 varas W 74 deg. ..... Drlg. sandy shale 4,672 ft.

JACKSON COUNTY

Chicago Gulf Corp.'s No. 4 Druschell (W.O.) ..... No report.
Chicago Gulf Corp.'s No. 10 Druschell, Hayes Sur., 1,390 ft. NW of No. 3 ..... No report.

JASPER (491 NT)

Hext Drlg. Co.'s No. 1 Flourney, B. F. Jones Sur., 900 ft. NW of Helmerich & Payne's No. 1 Flourney ..... T.D. 4,005 ft.; shut down.
Rio Neches Oil Co.'s No. 1 Boykin, 300 ft. NW of No. 1.. Sand 1,261-73 ft.; set 12 ft. of 4½-in. screen; rigging up to pump.

JEFFERSON COUNTY

John I. Pipkin and Elam's No. 1 Broussard, McGaffey Sur., 800 ft. from S line in center E and W of 205-acre tract ..... Trying to pull stuck drill stem 2,675 ft.
Jack Shultz' No. 1 M. O. Todd, 200 varas S and 55 varas E of NW cor. of Wm. Carr Sur. ..... Sandy shale 4,160-80 ft.; oil show reported.
C. R. Tolliver et al's No. 1 Tolliver, Duches Sur., 3,500 ft. from W line and 1,500 ft. S of Pine Island Bayou.. Abnd. 4,125 ft.

LIBERTY COUNTY

Bain-Rheubotham's No. 1 J. M. Neal, Edward Tanner Sur., 1,800 ft. E, 1,300 ft. N of most westerly NW cor. of Margaret Evans Sur. ..... Derrick.
Devore Oil Co.'s No. 1 Finley, 10,500 ft. from E line and 2,000 ft. from S line of A. B. Hardin Sur. ..... Drlg. gumbo 3,528 ft.

MATAGORDA COUNTY

Dr. Griffith et al's No. 3 Baer, Big Hill, 5,000 ft. N, 3,000 ft. E from SW cor. of Seth Ingram Sur. ..... Drlg. gumbo 1,631 ft.
United North & South Oil Co.'s No. 1 Stoddard, J. C. Keller Sur., 150 ft. W and 545 ft. N of SE cor. Blk. 53, Buckeye Townsite ..... Trying to make drill stem test 7,838 ft.

MONTGOMERY COUNTY

Gohlson Bros. and Rycade Oil Corp.'s No. 1 Drought 3,340 ft. along N line of Kronkrite Sur., from NE cor., thence 250 ft. S at right angles ..... Rigging up.
Heep Oil Corp.'s No. 1 Roberts, Wm. H. Harrison Sur., 450 ft. out of SE cor. of tract ..... Drlg. 200 ft.
Heep Oil Corp.'s No. 1 J. R. Freeman, John Davis Sur., 450 ft. from S line in center of 36.46-ac. tract .... Drlg. 1,100 ft.
Pevehouse Oil Co.'s No. 1 Sealey, Jas. Pevehouse Sur., 1,575 ft. N of N line of Horton & Woodson's 1,562-acre tract and 2,226 ft. E of W line of H.&W. 1,870-acre tract ..... Shut down 3,984 ft.
Strake Oil Corp.'s No. 2 South Texas Development Co., Theo. Slade Sur., 2,220 ft. S 10 deg. E of No. 1 .... Drill stem test at 3,967-4,022 ft. showed 25 fourbles mud, oil and water with gas; drlg. sand and shale 4,032 ft.
Wilson Oil Co.'s No. 2 Leiberman (Kelley-Baker), 7,175 ft. from W line and 75 ft. from S line of D. James Sur. ..... T.D. 4,922 ft; S.D.

NEWTON COUNTY

R. T. Briscoe et al's No. 1-A Joe Inman, 1,950 ft. E and 500 ft. N of SW cor. J. M. Scott Sur. ..... Shut down 1,795 ft.

ORANGE COUNTY

Altex Oil Co.'s (Veteran Oil Co.) No. 1 Reed, A. Nelson Sur. No. 1, 500 ft. from N line and 250 ft. from E line of tract ..... Fishing drill stem 4,655 ft.
Crew Oil Co.'s No. 1-A Mansfield, 50 ft. E of No. 1 ..... Shut down 2,275 ft.

POLK COUNTY

Freeman et al's No. 2 Freeman ..... Shut down 3,162 ft.
T. B. Hoffer's No. 1 Saner-Ragly Lbr. Co., 300 ft. out of most northerly cor. of most easterly County School Land Abst. 271 ..... Shut down 1,517 ft.

REFUGIO COUNTY

Humble Oil & Ref. Co.'s No. 1 O'Connor (D.D.), 6,012 ft. S from NE cor. along SE line of Lon T. Rios Sur., thence 7,375 ft. W at right angles in John Keating Sur. ..... Drlg. sandy shale 4,219 ft.
Humble Oil & Ref. Co.'s No. 2 O'Connor, John Keating Sur., 12,625 ft. N of S line at right angles and 3,158 ft. W of E line at right angles ..... Drlg. shale 3,751 ft.

SAN JACINTO COUNTY

Seven Wells Oil Co.'s No. 1 Foster Lumber Co., 3,000 varas from the E line and 2,000 varas from the S line of H. Alsbury Sur. ..... Spudded.

TRINITY COUNTY

John Deering's No. 1 J. B. Gibson ..... Drlg. shale 2,250 ft.
Joseph M. Weaver's No. 1 Thompson, 150 ft. out of NE cor. of I.&G.N. Sur., No. 47 ..... Shale 1,191 ft.; preparing to resume drilling.

VICTORIA COUNTY

Bunte et al's No. 2 Keeran, Martin DeLeon Sur., 200 ft. E of No. 1 ..... No report.
Houston Oil Co.'s No. 1-A McFaddin, 200 ft. from NE line, 240 ft. from SE line of I.R.R. Sur. No. 20 ..... Drlg. hard sand and lime 2,867 ft.
T. B. Slick Estate's No. 2 McFaddin, J. Varian Sur., 3,500 ft. NW of No. 1 and 1,100 ft. NE at right angles to SW line of lease ..... Sand 3,941-44 ft; D.S. test; 450 bbls.; dry gas.
The Texas Company's No. 4 McFaddin, 86 deg. E. 1,728½ ft. from NE cor. of Andrew J. Gray Sur. in John M. Rine Sur. ..... Pumping mud to kill gas pressure 2,840 ft.

WALKER COUNTY

Hart Oil Co.'s No. 1 Thompson Lbr. Co., Jose Ortega Sur., 1,265 ft. S, 1,876 ft. W of SW cor. of J. B. Gibson's 71-acre tract ..... Shut down for repairs 2,090 ft.
Geo. F. Kerr's No. 1 Smithers Bros., S. Manning Sur..... No report; previously reported as drlg. shale and sand 701 ft.

WALLER COUNTY

McDaniel and associates' No. 1 Citizens State Bank, B.B.B.&C. Sur., C of 150-acre tract ..... No report.

SOUTH LOUISIANA

ASCENSION PARISH

McElroy Pet. Co.'s No. 2 Lacey, 150 ft. S, 150 ft. W of NE cor. of Sec. 29-10s-4e ..... Drlg. rock 4,540 ft.

CALCASIEU PARISH

Crawford Doyle's No. 1 Johnson, Sec. 23-9s-13w ..... Shut down 875 ft
Wilfred Lahay's No. 1 Jardell, Sec. 16-10s-12w ..... Shut down 3,650 ft.

CAMERON PARISH

Brownie-Babbette Oil Co.'s No. 1 R. A. Moore, 562 ft. W, 50 ft. S of NE cor. E half SE of Sec. 18-12s-12w.. Drlg. 4,595 ft.

EVANGELINE PARISH

Emile LeDeau's No. 1 Vidrine, 260 ft. W and 350 ft. S of NE cor. of Sec. 47-3s-3e ..... Shut down 1,420 ft.

IBERIA PARISH

Warrick Oil Co.'s No. 1 Bernard, 912 ft. N and 150 ft. E of SW cor. Sec. 54-12s-7e ..... Rig.

IBERVILLE PARISH

Standard Oil Co.'s No. 2 Myrtle Grove-Wilbert, Bayou Choctaw, 2,040 ft. N and 600 ft. W of C of Sec. 52-9s-11e ..... No report.
Standard Oil Co.'s No. 2 Gay, Bayou Choctaw, 4,500 ft. N and 600 ft. E of SW cor. SE of Sec. 52-9s-11e..... No report.
Standard Oil Co.'s No. 7 Schwing, Bayou Blue, 1,359 ft. N and 1,856 ft. E of C of Sec. 74-9s-10w ..... No report.

LA FOURCHE PARISH

State Prod. Co.'s No. "D" W. H. Stark, 1,935 ft. S and 1,550 ft. W of NE cor. Sec. 72-15s-15e ..... Comp. sulphur test.

PLAQUEMINES PARISH

Lake Washington-Freeport Sulphur Co.'s No. 1 Cockrell-Moran, Sec. 14-20s-26e, 2,442 ft. E and 46 ft. N of station ..... Cap rock showing oil 1,117 ft.; cmtd. 10-in. csg. 1,101 ft.

POINTE COUPEE PARISH

Grand Bay Oil & Gas Co.'s No. 1 Moniotte, 10,140 ft. S and 13,450 ft. E of NW cor. Twp. 5s-11 in Sec. 24.... Shut down 310 ft.

TERREBONNE PARISH

La. Gas & Fuel Co.'s No. 2 Minor, 3,480 ft. S and 1,980 ft. E of NW cor., Sec. 3-18s-14e ..... T.D. 6,002 ft; plugged to 3,882 ft.
Freeport Sulphur Co.'s No. 2 Wurzlow, Bay St. Elaine, 980 ft. S and 850 ft. W of NE cor. of Sec. 17-22s-18e. Sulphur test.
The Texas Company's No. 5 State, Dog Lake, 2,270 ft. S and 450 ft. E of NW cor. of Sec. 5-22s-16e ..... Drlg. lime rock 3,250 ft.
The Texas Company's No. 2 La.L.&E., Lake Barre ... Drlg. sandy shale 3,835 ft.
The Texas Company's No. 9 State-Lake Barre (D.D.).. Deepened from 3,827 to 3,847 ft.; waiting cement to set.
The Texas Company's No. 10 State, Lake Barre ..... Location.
The Texas Co.'s No. 14 State Lake Barre, 400 ft. S, 850 ft. W, NW cor. Sec. 30-21s-20e, in Sec. 37-21s-19e ..... Driving piling.

WEST FELICIANA PARISH

Putnam Synd.'s No. 2 Como Plantation, Sec. 51-1s-14w.. Shut down 2,449 ft.

FOUR DISCS
OF THE GUIBERSON DISC BIT
CUT DOWN OVERHEAD

Fully Patented

AMAZING SPEED, resulting in less drilling time . . . A STRAIGHT HOLE, by numberless tests . . . CAPABILITY OF DRILLING THROUGH ROCK SHELLS without a pull-out to change bits . . . LESS REPLACEMENT OF PARTS, through ingenious control of wear . . . all these features and more, insure big savings in time, material and labor when you use the Guiberson Four Disc Reaming Rotary Bit.

The Guiberson Disc Bit now holds a long list of performance records. Pay particular attention to the unique savings and advantages gained by Four Discs.

Four Discs cut up material more finely for flushing from well. Two inner discs cut up core which gives trouble with two-disc bit, impeding free roll and wearing cutters flat.

Axis is offset from true radius of bit, so that discs have full circumferential travel. Inside and outside cutters are on different axes, so that spaces between them are kept clean by revolution of cutters.

Reamers in side plates ream full size; no further reaming necessary.

Water flush holes extend to bottom of bit, keeping bottom of hole clean and flushing cutters.

Head of bit is flat on two sides, providing ample passage for water and cuttings. Due to speed of bit, efficient, large capacity pumps are recommended.

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GUIBERSON
BETTER BE SAFE THAN SORRY

Natural Gas Industry Developments

TO SELL GAS SECURITIES OF TRI-UTILITIES CORP.

NEW YORK, May 2.—The remaining assets of the Tri-Utilities Corp., which is in receivership, will undergo a further contraction on May 9, when seven parcels of its securities will be offered at public auction to the highest bidder for all or for the separate parcels of securities by the Equitable Trust Co. of New York, as successor-trustee.

The securities consist principally of notes and of the collateral, in cases where the notes are secured, underlying the obligations. The sale will virtually remove the American Natural Gas group of properties from the Tri-Utilities system, similar to the separation of the Federal Water Service Co., recently completed.

Efforts to reorganize the American Natural Gas Corp. and its principal subsidiary, the Oklahoma Natural Gas Corp., have been at a standstill because of difficulty in forming a reorganization committee and of engaging the interest of bankers and security holders in working out the problem.

The securities to be auctioned consist principally of voting trust certificates for 398,419 common shares, 9,401 preferred shares and 159,121 second preference shares of the American Natural Gas Corp., representing control of that company, which is also in receivership.

In addition, there will be sold 1,000 common shares of the Ozark Public Service Co. and a promissory note of that company for $529,166, payable to Tri-Utilities on December 15, 1931; also, a promissory note of the Oklahoma Natural Gas Corp. for $70,000, payable to Tri-Utilities on March 25, 1932.

The auctioneer will offer, besides, three promissory notes of the American Natural Gas Corp., all payable to Tri-Utilities Corp., with two secured notes of $800,000 and $351,000 respectively, payable on demand, and one of $780,775, which is unsecured, payable on July 15, 1931; and of continuing loan agreement dated March 31, 1931, between American Natural Gas and Tri-Utilities.

Collateral securing the two notes first named consists, first, of 10,092 second preference shares of Oklahoma Natural Gas; 20,000 common shares of Natural Gas Producers Corp., in which Oklahoma private interests also have holdings, and 99,975 common shares of Western Gas Service Corp.; secondly, of 21,236 second preference shares of Oklahoma Natural Gas; 1,000 common shares of Quinton Natural Gas; 1,000 capital shares of Texocan Oil Co.; 200 common shares of Oklahoma Natural Gas Building Co.; 750 common shares of Trojan Engineering Corp.; 1,800 common shares of Tri-Utilities Securities Corp., and 355 $6 preferred shares of Tri-Utilities Securities Corp.

GUTHRIE CASE TO COURT

The city of Guthrie, Okla., has filed suit in Federal Court at Oklahoma City for an order enjoining the Lone Star Gas Co. and its subsidiary, the Guthrie Gas Service Co., from operating a gas distributing system in Guthrie.

The petition, signed by Mayor H. T. Anderson and Merle G. Smith, city attorney, alleged the company was operating in Guthrie without a franchise and asked the company be ordered to remove its distributing system from the city.

The Western Service Co., operated by Logan Carey, receiver, holds a Guthrie franchise and is furnishing gas at 44 cents. The Guthrie Gas Service Co. is selling gas at 43 cents and recently started a move for an election on the question of granting it a franchise at a 38-cent rate.

JAPANESE PLANT NOW MAKING CARBON BLACK FROM RESIDUE

By D. Matsusawa*

The Nippon Petroleum Oil Co. recently took up the manufacture of carbon black, utilizing the residual gas from its gasoline plant, and is now treating about 2,500,000 cubic feet per day.

The carbon black plant was installed at Taihei, near the Kinsui oil well, which is situated on a plain, surrounded by small hills on three sides, and is comparatively free from winds.

The natural gas of the Kinsui oil well has the following composition:

CH_4	97.4%
C_mH_n	1.3%
O_2	0.6%
CO_2	0.7%
Sp. gr.	0.58
Cal. power	1,007 B.t.u.

The raw material for the manufacture of carbon black, that is, the residual gas which has passed through the gasoline plant, contains more than 98 per cent of CH_4 and has a specific gravity of 0.565, the calorific power of which is 1,000 B.t.u.

The plant in question is of the channel type. The pressure of the incoming gas from the gasoline plant is reduced by a governor, and passed at a constant quantity, by means of a volume regulator, to the combustion chamber through an 8-inch main pipe under a pressure of 5 inches of water.

Combustion Chambers

There are 20 combustion chambers, and each of these has two 4-inch pipes for gas supply, which are branched from an 8-inch main. Each 4-inch pipe has 26 branches of 2-inch pipe, and each of these has 280 burner pipes. Each of the burner pipes is provided with 10 gas outlets, called "lava tips." The number of "lava tips" is, therefore, 2,080 for the combustion chamber, that is, 41,600 in total for the 20 chambers.

The combustion chamber is 12 feet in width, 116 feet in length and 9 feet in height. It is constructed with steel beams, and covered with iron sheets. The two side walls of the chamber have many draft holes of 2"x12" size at about 4 feet distance at the lower part, near the ground floor. There are two windows of a size of 4 feet at both ends of the top of the roof, which act as chimneys. The "lava tip" is made of steatite and the slot in it is 0.034 inch.

The carbon black produced is deposited on the channel in the combustion chamber, which is 8 inches in width and 109 feet in length. Under the channel, there are iron hoppers into which the carbon black on the channel is collected by the moving scraper.

The working temperatures are about 820° C. in the flame and about 500° C. at the channel. If the temperature is too low, owing to too small a quantity of air being supplied, the decomposition of hydrocarbons is incomplete. On the other hand, if the air is fully supplied, the flame temperature becomes very high and consequently the carbon burns away. Moreover, the weather as well as wind has a considerable influence on the properties of the carbon product. The operator, therefore, has to control carefully the draft of the combustion chamber, according to the changes in the weather and wind.

Quality Is Good

The required nature of carbon black in the market are color, powderness, moisture, volatile matters, fixed carbon, as well as acetone extract. As regards these properties, the Kinsui product is by no means inferior to those of the United States. It has a velvet color and passes completely through 100-mesh sieve. The acetone extract is less than 0.1 per cent, and the content of moisture, volatile matter, ash, as well as fixed carbon, can be seen in the following table:

Date of sampling—	Moisture %	Volatiles %	Ash %	Fixed carbons %
Dec. 19, 1931	1.781	5.534	0.021	93.164
Dec. 20, 1931	1.765	4.593	0.043	93.653
Dec. 21, 1931	1.006	5.151	0.014	93.803
Dec. 22, 1931	1.252	4.882	0.063	93.803
Dec. 23, 1931	1.324	3.633	0.011	95.032
Dec. 24, 1931	1.111	4.563	0.008	94.318

The efficiency of the recovery of carbon black at the plant accounts for 1.5-1.8 pounds per 1,000 cubic feet of the gas burned, which is better than that in the United States.

Before this carbon black plant in Kinsui was started, all carbon black consumed in this country was exclusively imported from the United States. The imported amount for a period of five years is shown in the undernoted table.

Year—	Amount (kg)	Price (yen)
1926	1,184,386	745,061
1927	1,532,609	807,055
1928	2,243,192	1,165,441
1929	2,204,756	1,113,776
1930	2,187,000	786,137

The price of carbon black was, according to investigations made by the department of finance, as undernoted:

Year—	Price (c.i.f.) sen/lb.	Retail price— Max.	Min.
1923	43.85	80	75
1924	25.34	75	70
1925	27.64	62	58
1926	28.31	60	55
1927	23.69	50	40
1928	24.35	50	30
1929	16.96	30	27.8
1930	16.22	22.3	18
1931	12.84	22	15

*In the March, 1932, issue of the Journal of the Fuel Society of Japan.

TEXAS GAS HEARING

AUSTIN, Tex., May 2.—The Texas Railroad Commission has set for hearing May 7 complaint of the Masterson estate against the Canadian River Gas Co. alleging that discrimination has been practiced in taking gas from the complainants. Holdings of the Masterson estate are in the West Panhandle Field of Potter and Moore Counties.

UNITED CARBON REPORT

United Carbon Co.'s net profit for the first quarter, based on preliminary figures, is estimated by the management at $60,000 after ample deductions for depreciation and depletion, interest and all other charges. This result is comparable to an operating loss of $23,000 last year, indicating an operating improvement of $83,000.

Inventories of carbon black continue to decrease, amounting on March 31 to $53,000 less than at the end of 1931. Profit in the first quarter is attributable to profitable gas sales, while at the same time the management has continued to effect economies in the carbon black division, so that the handicap to profit from this source has been reduced to a minimum.

TROY, KANS., GAS CONTRACT

Troy, Kans., city council has granted a 20-year franchise to P. C. Hansen of Kansas City to furnish the city with gas.

COMMITTEE TO CONSERVE KANSAS NATURAL GAS

TOPEKA, Kans., May 2.—As a step toward conservation of Kansas' natural gas reserves, the Public Service Commission has created an advisory committee to work out rules and regulations.

The commission issued an order requiring operators to obtain a permit before drilling an oil or gas well in the State, except in oil pools in which production averages 15 bbls. a well per day. The order, effective at once, provides no producing sand shall be penetrated except under direct supervision of a commission conservation agent.

Commissioner Thurman Hill pointed out the commission had no power to deny a permit, but said the order would give the regulatory body a record of drilling activities and enable the commission to have its conservation agent see that a producing sand structure is properly sealed off.

Commissioner Hill announced appointment of the following gas conservation advisory committee:

Dr. Raymond Moore, state geologist, Lawrence, chairman; A. L. Oswald, mayor of Hutchinson; Cyrus A. Leland, Jr., Topeka, president, Kansas Power & Light Co.; B. R. Maltby, mayor of McPherson; U. G. Charles, mayor of Hugoton; A. S. Ritchie, Wichita, production manager, Derby Oil Co.; C. S. Warren, Eldorado, production superintendent, Empire Gas & Fuel Co.; Joe Smith, Hugoton, production manager, Argus Pipe Line Co.; A. M. McQuiston, Wichita, production manager, Phillips Petroleum Co.; Donald Stewart, Independence, vice president, Union Gas Corp.; L. R. Slater, McPherson, Kansas production manager for Derby Oil Co., and George P. Dickey, Wichita, independent oil and gas operator.

Conservation rules and regulations as prepared by the committee will be submitted to the commission by May 27.

"Along with these conservation plans," Commissioner Hill said, "the committee is to try to work out measures to bring about greater consumption of Kansas gas. There is a market now for only 2 to 5 per cent of the gas produced in the State. Every community in the State should have gas fuel at a very reasonable price with this great reserve waiting to be marketed."

Mr. Hill said Joe Smith, advisory committee members, estimated at a hearing before the commission in Hutchinson that the gas reserve in the Hugoton (southwestern Kansas) Field was 15,000,000,000 feet; that the average annual consumption in the State was 50,000,000,000 feet per year, and that on this basis the State had a 250-year supply "if all the gas is recovered."

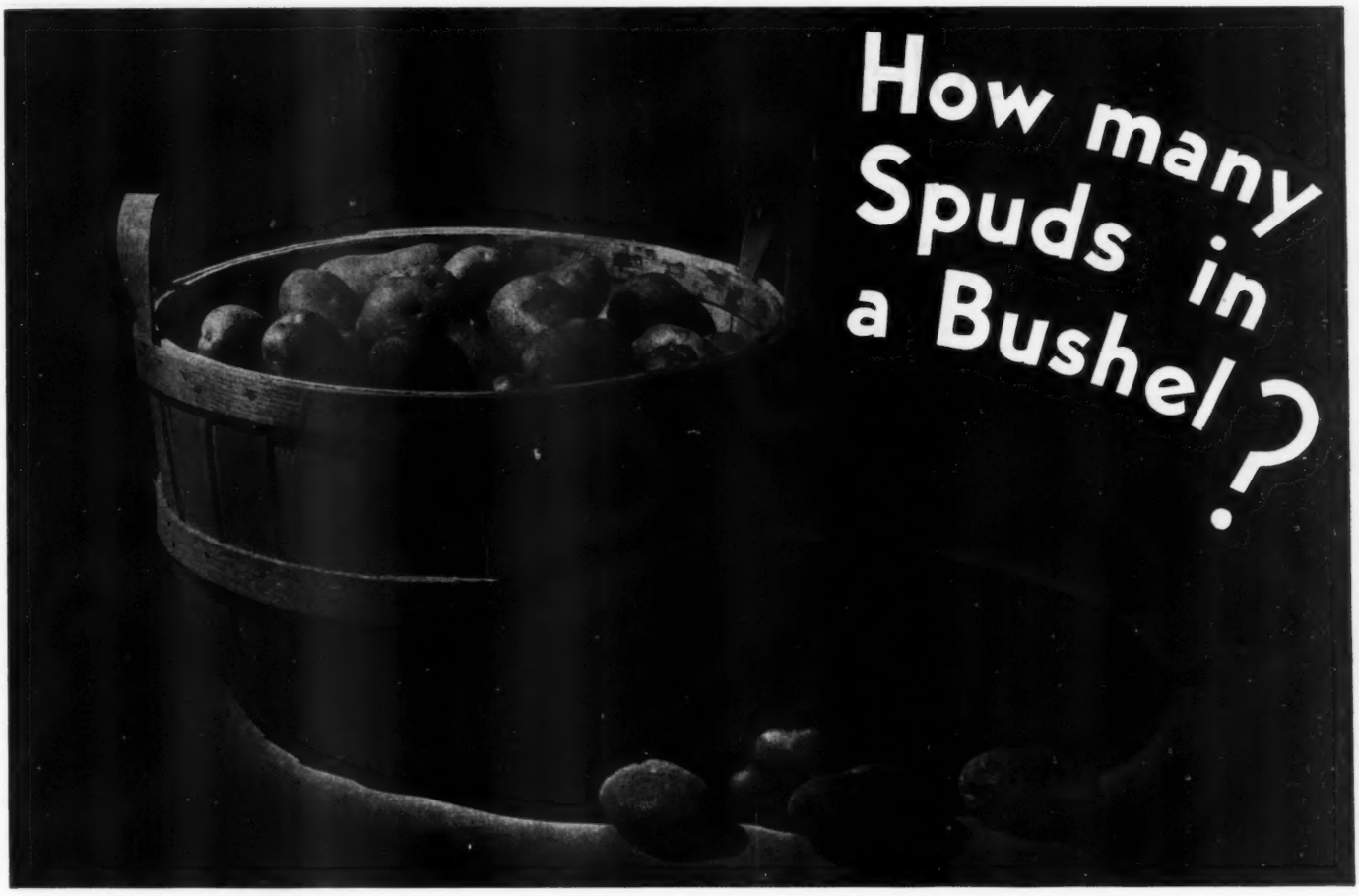
Commissioner Hill said Doctor Moore, chairman of the committee, estimated the entire State's reserve at 10,000,000,000,000 feet.

As an example of need for conservation measures, the commissioner pointed to the McPherson Field. He said the field, with 50 wells, at one time had a 937,000,000-foot open flow daily, but that on account of the fact that operators are drilling gas wells into oil sand the volume is being cut every day and unless immediate steps are taken the entire field will be ruined.

H. I. Craig, Independence, has been selected by the commission to act as its conservation agent in charge of the work under the new order.

SHAWNEE FRANCHISE VOIDED

The Shawnee, Okla., city commission has voided the gas franchise which was voted the Western Service Corp. in a special election August 6, 1931.



It's Pretty Hard to GUESS!

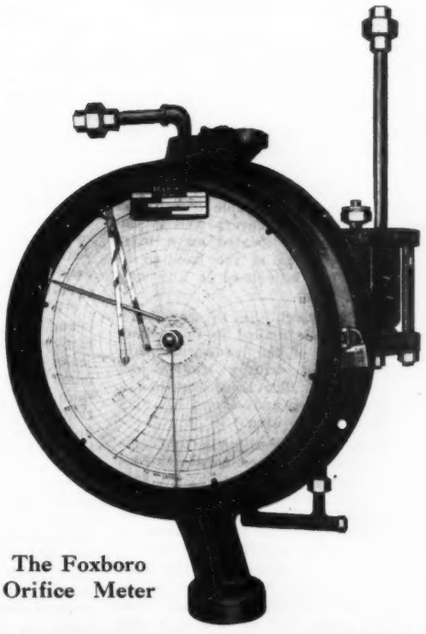
But at that it would be a cinch compared to guessing at the cubic feet of gas passed through a line.

Of course you would think it foolish to guess at cubic feet—yet it is just as bad to guess at the *accuracy* of the meter you use to measure it.

Continuous accuracy is a matter of design and construction. It is as simple as that! Have you studied the design of the Foxboro Orifice Meter?

Because of its STRAIGHT LINE Motion the Foxboro Orifice Meter will maintain its extreme accuracy *longer than any other.* Records show this and we stand ready to prove it any time and anywhere.

If you buy or sell gas our new Bulletin, "Orifice Meters for Gas", No. 176-J, should be on your desk. Write for it today.



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Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

NO GEOLOGICAL EVIDENCE

I am writing for information regarding the discovery of the East Texas oil pool. Was the Joiner well located on a magnetic high, or was there any structure to indicate the presence of oil there? It is my impression that this is a low, sandy soil, without any structure to indicate oil.—H. G. K.

This department is unable to tell you whether the Joiner discovery well in the East Texas Pool is located on a magnetic high. Selection of the location of the test was not influenced in any way by geological work.

The well in which the oil was found was the third hole drilled in this immediate area. One of the holes was abandoned because of drilling trouble and another was dry. The third test had a small showing of oil and started the play in the East Texas area.

Assertions have been made that this well was located from geological evidence but there seems to be nothing to substantiate this statement. There is, of course, surface geology to be studied in this area but from the surface there is no evidence of the underlying oil pool.

The surface is sandy and the area covered with woods. The Sabine uplift is a regional structure and has been known for years, but to determine the location of oil pools around its edge from surface evidence has not been possible. As a matter of fact, drilling has been carried on in the vicinity of the East Texas Pool for nearly 42 years. The oldest oil field in Texas is close to this new field.

An article in the March 3, 1932, issue of The Oil and Gas Journal on "Intensive Search for Hidden Pools" will give you information about shore-line oil fields of the East Texas type.

RATE OF PUMPING IMPORTANT

After a well has stopped or almost stopped flowing and it is to be produced by pumping how is the operator to decide at what rate he ought to pump the well to get the best results? Wells in this region have to be put on the pump very soon after they are brought in as a rule, and there are few large wells. In some cases the well is pumped from the start.—G. D. S.

Various considerations enter into the question of determining the rate at which a well should be pumped and local conditions have much to do with it. For instance, the method of handling wells that produce water which migrates to the hole through the oil sand is quite different from the method of operating wells in which the water comes from sources other than the oil sand. To determine the proper rate of pumping such wells a knowledge of the principles which may govern the movement of fluids in the individual well is important. Again, large wells when pumped hard are likely to be "gassy" and to flow more oil through the tubing than the rated capacity of the pump. In such wells the pump agitates the fluid or lowers the fluid level and causes them to flow by heads. On the general subject of determining the rate at which to pump, Prof. H. C. George says in his "Oil Well Completion and Operation":

"The proper rate to pump wells must be considered from two standpoints, namely cost of operation and the rate that will give the greatest total yield of oil. Small wells that pump off regardless of the type of equipment used are subject to regulation. In some cases they are pumped only a few hours each day, while in others they are pumped continuously very slowly but steadily.

"Increased pumping costs due to pumping full time are therefore not the governing factor at wells that will stand pumping continuously. The kind of power and the surface pumping equipment may be modified to reduce the expense, but the operator will not be lowering unit costs by shutting down such wells part of the time each day. When wells reach the stage of pumping off the time has arrived for all possible reductions in pumping expense that will not seriously cut down the potential output. This is indeed the critical period in the life of a well, for its continued operation must depend on making its revenue exceed its operating cost.

"Whether wells are pumped 'on the beam' or on jacks is a prime consideration because wells that are pumped with jacks ordinarily can be pumped to a much lower limit of economic production than wells on the beam. The same engine that pumps a single well on the beam may pump 20 or 30 wells on a properly balanced power, with less labor and less wear and tear on equipment.

"As a rule it is desirable to shut down a well pumping on the beam as soon as it starts to pump off in order to save fuel and deterioration of equipment. This can be done in the Eastern fields and most fields of the Mid-Continent, but it is impractical if water must be kept pumped down or if the oil carries much sand. In some wells, for instance, a plunger will sand up within a few minutes after pumping is stopped. In some fields operators often pull the plungers from the working barrels in order to prevent the plunger from sanding up when shutting down wells producing considerable sand. In such cases it may be more profitable, considering a possible increased recovery and less sanding up, to pump a well more slowly for the full 24 hours.

"A well which pumps by heads when on a power must be considered from a different angle, because the operating expenses are practically fixed, and if the power runs 24 hours a day the well may be pumped the full time or for any interval or intervals throughout the day that are best adapted to it. If the wells cannot be pumped continuously the powers must be operated for the period each day best suited to the largest wells. There may be times when one or more wells cannot be pumped off within a reasonable length of time after all the others on the lease are hooked off. This condition may be overcome by the use of larger sized tubing or by increasing the length and rate of stroke. However, if the production of a well cannot be handled conveniently from the power an individual unit should be installed at the well."

WHY WAS IT CALLED THAT?

POKER CHIP SHALE

Certain types of shale found in coring operations are designated by petroleum geologists as poker chip shales because the shape of the core suggests a stack of the red, white and blue counters used in the well-known card game which has aided in quick transfer of the week's wages in the boom period of almost every new oil town. This resemblance results from the edges of the laminated layers of the shale being rounded by the action of the rotating core barrel and the softer section lying between the shale layers being washed out, giving the layers of shale the appearance of being separate smooth-edged discs assembled one on top of another.

Adoption of the name may have come about through somebody familiar with the game of poker telling a geologist about it.

EQUIPMENT IN EASTERN AREAS

What types of drilling tools and rigs are used in the eastern oil fields, please? By eastern fields I mean those in Pennsylvania, New York, Ohio, West Virginia, Kentucky and Tennessee. Are you able to tell me roughly what percentage of wildcat wells drilled in these eastern areas since the Drake discovery opened up new pools?—D. S. G.

Drilling operations in the Appalachian Field, which embraces the oil areas in the states you enumerate, are performed entirely with cable tools. The equipment used is of many kinds. The derricks used in drilling are usually 74 or 80 feet high. Calfwheels are not used, the casing strings being handled by the bullwheels. Changing of ropes and lines on the bullwheels involves some loss of time, but drillers express the opinion that it is better to incur this than to install calfwheels, since underreaming virtually never is done. Most of the formations encountered stand up well. A manila "cracker" usually is employed immediately above the drilling tools. This may be regarded as a compromise between the old method of drilling with manila rope and the modern one of using wire cable.

About 20,000 wildcat wells are estimated to have been drilled in the Appalachian Field from 1859, the year of the Drake discovery, to the present time. Slightly under 95 per cent of these were dry. Of the 990 wildcat wells which opened up fields of commercial importance from 1859 to 1928, inclusive, in these eastern areas, 767 were oil fields and 223 were gas fields.

ELECTRICAL TESTING OF SOIL

An electrical method of testing soils for their corrosive qualities is referred to in literature on the subject. Can you tell me what this method is?—S. G. F.

There are several methods of using electricity to determine the corrosive character of soils. The ones referred to oftenest are perhaps those devised by J. F. Putnam. His methods are discussed as follows by K. H. Logan, of the U. S. Bureau of Standards:

"Putnam formed 10 feet of No. 28 iron wire into a coil 2 inches in diameter. The coil was held in shape by an insulating frame. One end of the wire was attached to a one-fourth inch iron rod in the center of the coil, and a potential difference of two volts was maintained between the rod and the other end of the wire. The rod and wire were imbedded in the soil to be tested. After 96 hours the wire was examined for the location of a point at which the type of corrosion changed. From the length of the wire and the impressed voltage the potential difference between the rod and the point of change in corrosion was computed.

"This potential difference is supposed to be that required to cause current to flow through the soil, since electrolytic corrosion occurs over that portion of the wire at the higher potentials with respect to the rod. It is the potential required to overcome the overvoltage at the anode plus the IR drop through the soil. Putnam designated this as the ionization potential, and found the corrosiveness of his soils to be inversely proportional to the ionization potential.

"Later Putnam developed another method of determining soil corrosivity. The soil to be tested is packed in a frame of unit volume. A potential of 1.4 volts is impressed across the soil through steel plates fitting the ends of the frame. After 10 minutes the current flowing through the soil is measured by a milliammeter. This current, which for certain California soils Putnam found experimentally to be proportional to the corrosiveness of the soil, he represents by the formula $I = \frac{E_c - E_d}{R}$, where E_c is the 'causation' potential E_d the decomposition potential, and R the resistivity of the soil. Putnam selected 1.4 volts as the 'causation' potential after considerable experimentation, and pointed out that this not only resulted in an agreement between his test data and field experience, but that this value was the potential between two electrodes in an electrolyte from one of which oxygen was excluded while a plentiful supply was furnished to the other one. The oxygen-deficient electrode corresponds to the condition at the bottom of a pit beneath a tubercle or rust incrustation.

"Putnam's idea of a single cause of corrosion is in line with Evans' theory of oxygen concentration cells. On the other hand, Kuhn has shown that the potentials causing corrosion underground are frequently much less than one volt.

"According to Putnam, E_d is a measure of the tendency of the cell to polarize. It can be shown experimentally that the polarization experienced in the use of the Putnam cell depends largely on the current density. This in turn depends on the resistivity of the soil and upon the length of the cell. Hence the value of I in Putnam's formula can be influenced very materially by shortening or lengthening the test cell. It appears, therefore, Putnam's formula does not entirely represent the performance of his apparatus, and that soil resistivity affects his results in more than one way."

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Personal Paragraphs About Oil Men

W. M. Fraser, Marathon Oil Company, has moved from Galveston, Tex., to Bristow, Okla.

* * *

J. C. Phillips, of the Gulf Refining Company, has moved from El Dorado, Ark., to Shreveport, La.

* * *

D. B. Harris, Humble Oil & Refining Company, has moved from Tyler, Tex., to San Antonio, Tex.

* * *

Dr. Emil Ott has returned to San Angelo, Tex., from a visit to his former home in Bern, Switzerland.

* * *

C. C. Phillips, the California Company, has moved from San Angelo, Tex., to Corpus Christi, Tex.

* * *

Forest W. Hood, geologist, with the Mid-Kansas Oil & Gas Company, has moved from Kingman, Kans., to Chandler, Okla.

* * *

J. O. Maxwell, national account salesman of Goodrich Tire & Rubber Company, Dallas, Tex., was in Tulsa for a few days last week.

* * *

W. D. Weathers, president of the Fargo Western Oil Company, has returned to his Casper, Wyo., offices from an eastern business trip.

* * *

Paul J. Getty, president of George F. Getty, Inc., left Los Angeles several days ago for a business trip to New York and other eastern centers.

* * *

H. J. Tuckett has been appointed manager of the central division of Shell Service, Inc., a California marketing subsidiary of the Shell Oil Company.

* * *

Fritz Taves, a production engineer in the California umpire's organization, recently announced the arrival of Miss Taves, born in Los Angeles, Calif.

* * *

D. G. Fisher has been appointed manager of the northern division of Shell Service, Inc., a marketing subsidiary of the Shell Oil Company of California.

* * *

John B. Holtzclaw, formerly employed as chief chemist with the Kentucky Highway Department, is now research chemist with the Standard Oil Development Company, Elizabeth, N. J.

* * *

Ralph G. Bowman, assistant general sales manager of the General Petroleum Corp. of California, a subsidiary of Socony-Vacuum, has been elected to the board of directors of the former company.

* * *

H. W. Dodge, vice president and general sales manager of The Texas Company, has been making a general survey of marketing conditions on the Pacific Coast.

* * *

J. J. "Jack" Doyle, president of the Doyle Petroleum Company, recently returned to Los Angeles from an inspection trip through the Midway-Sunset Field of Kern County.

* * *

J. B. Arthur, manager export department of the Union Oil Company of California, sailed for Honolulu a few days ago to attend the national convention of the Foreign Trade Council.

* * *

John C. Rohlfs, manager of the marine department of the Standard Oil Company of California and chairman of the board of governors of the California State Nautical School, was in Los Angeles over the past week-end but has subsequently returned to his office in San Francisco.

* * *

E. L. Saurer, until recently connected with the Marathon Oil Company with headquarters at Sioux City, Iowa, is now general office manager for the Republic Oil Refining Co., Houston, Tex. Before the organization of the Marathon Oil Company Mr. Saurer had served with the Benedum-Trees interests for many years and with the Houston company he returns to his former employ.

A. J. Weideman has moved from Mount Pleasant, Mich., to Owensboro, Ky.

* * *

Truitt Cranfill, of Cranfill Brothers, Dallas, Tex., is arranging to operate in Southwest Texas.

* * *

Oscar K. McElheny, petroleum engineer, Atlantic Oil Producing Company, has moved from Dallas to Longview, Tex.

* * *

C. P. Link, vice president of the Sequoia Oil Company, of Fort Worth, Tex., is arranging to move to San Antonio. His home has been in Dallas.

* * *

Ed Dawson is arranging to move his family to San Antonio from Midland, Tex. He has been in the land department of the Texas Pacific Coal & Oil Company until recently.

* * *

H. A. Buehler, state geologist of Missouri, and H. S. McQueen, professor of geology at the Missouri School of Mines, Rolla, addressed the Dallas Petroleum Geologists on the "Correlation of Limestones by Means of Their Insoluble Residues."

Men of the Industry

James H. Jenkins

James H. Jenkins, general manager of the producing division of the Associated Oil Company, was born in Petroleum, W. Va., September 5, 1882, and graduated from West Virginia University, Morgantown, in 1908. He worked in the old Volcanic oil field of West Virginia, when not in school or college. From 1909 to 1912 he was engaged in geological and engineering work in West Virginia and Pennsylvania, and in the fall of 1912, he went to Oklahoma, to continue in similar work, first for the Higgins Oil & Fuel Company then as consulting geologist with headquarters in Tulsa, and from 1916 to 1919 as chief geologist and engineer for the Midco Petroleum Company. In September, 1919, he became chief geologist of the Tidal Oil Company.

From October, 1919, to February, 1922, Mr. Jenkins was in Mexico, except for five months spent in the Mid-Continent. From February, 1922, until January 1, 1929, he was head of the land and geological department of the Texas division for the Tidal Oil Company. He was also in charge of the Associated Oil Company's operations in Texas from August, 1926, to January, 1929. In 1929 Mr. Jenkins became general manager of the producing division of the Associated, with headquarters in San Francisco, Calif.

J. E. Elliott, of Wichita Falls, Tex., has moved to San Antonio.

* * *

W. C. Marshall, of Fort Worth, Tex., has been visiting in Southwest Texas.

* * *

Harry N. Trior, of Trinidad Leaseholds, Ltd., with headquarters in London, England, is visiting New York.

* * *

E. Le Q. Herbert, B.Sc., of Mexican Eagle Oil Company, has been elected a Fellow of the Institute of Chemistry.

* * *

F. L. Holmes, Smithport, Pa., has been visiting the Big Lake Field, Reagan County, West Texas, and the East Texas Field.

* * *

W. A. Wagner, of San Angelo, Tex., has moved to San Antonio. He was attorney for Taylor-Link Oil Company for five years and also at one time for T. P. Lee of Houston.

* * *

William G. Heltzel, general superintendent, and J. B. Harshman, master mechanic, of the Stanolind Pipe Line Company, of Tulsa, are inspecting the Illinois division of the system.

* * *

Curt G. Hamill, Gulf Coast operator and president of the Hamill Drilling Company and associated companies, Houston, Tex., has been taking a few weeks' rest at Mineral Wells, Tex.

* * *

Mr. and Mrs. Thomas McCort have returned to Petrolia, Ontario, on a three months' furlough from Peru, where Mr. McCort has been on the International Petroleum Company staff for the past three years.

* * *

H. Ray Milner, K.C., of Edmonton, Alberta, has been appointed president and managing director of Dominion Gas & Electric Company, succeeding the late C. J. Yorath. Mr. Milner was previously solicitor for the company.

* * *

H. Thompson, general sales manager of the "BP" organization in England, has retired after a long service dating back to the days of the General Petroleum Company, which was taken over in 1907 by the British Petroleum Company.

* * *

At the annual meeting of the Tulsa Stratigraphic Society, Bruce Harlton of Amerada Petroleum Corporation, was made president; John Ware, of Skelly Oil Company, vice president; and Robert Whiteside, of Shell Petroleum Corporation, secretary-treasurer.

* * *

C. Le Maistre, director of the British Standards Institution, is in the United States conferring with the American Standards Association. Mr. Le Maistre is en route to England after visiting New Zealand and Australia in connection with standardization work in those countries.

* * *

A. B. Capers, former deputy oil and gas supervisor of the Texas Railroad Commission, in the East Texas Field, and more recently a captain on the staff of Brig. Gen. Jacob F. Wolters, has been made production superintendent, for the E. L. Chapman properties, by David Donoghue, receiver. The properties are located in East Texas, in Williamson County and in the Urbana district of Arkansas.

* * *

Officials of the Tide Water Oil Company, and Tidal Oil Company recently completed an inspection trip of the companies' holdings in East Texas. E. L. Shea of New York, executive vice president in charge of production, marketing and manufacturing for the Tide Water Oil Company, headed the party. E. H. Salrin of Tulsa, president of Tidal Oil Company; R. B. Pringle, of Tulsa, vice president and general manager of Tidal; J. R. Gahan of Fort Worth, vice president and general manager of the Texas division, and D. E. Legan, Tidal's East Texas superintendent, were others included in the official party.

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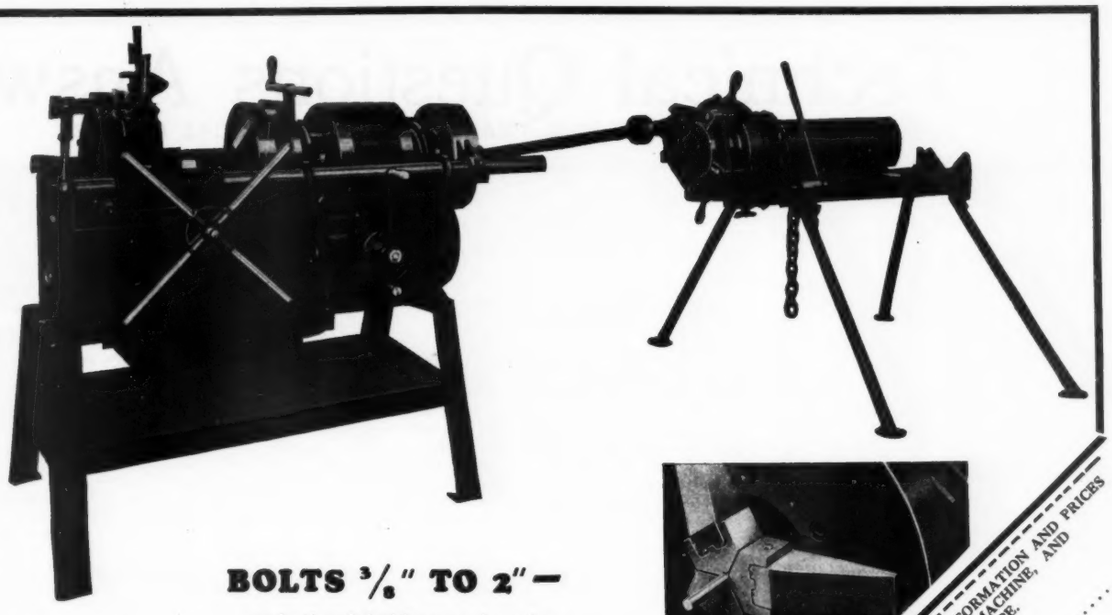

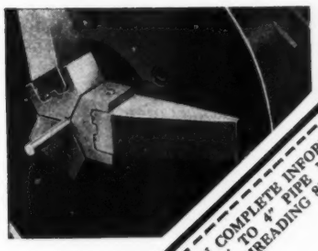

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Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas, and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

SULPHONATION TEST INSECTICIDAL SPRAYS

What is the sulphonation test used for testing oils and preparations that are used in sprays for killing insects? What does this test indicate?—H. D.

There are several petroleum oils, also mixtures containing fatty oils, used as insecticidal sprays. The oils of mineral origin may contain both saturated and unsaturated hydrocarbons. The unsaturated hydrocarbons and the fatty oils are acted upon by sulphuric acid, but the saturated hydrocarbons withstand this treatment or the action proceeds very slowly. Any mixture treated with sulphuric acid will leave a residual oil which represents the saturated oils present in the original sample. The acid removes the unsaturates, some sulphur compounds, part of the fatty oils, gums and resins. The mixtures containing large quantities of unsulphonated residues are used for summer sprays, while those containing relatively low percentages are used on deciduous trees during the dormant period in winter.

The sulphonation test, as used for the examination of oil sprays, is described in S. P. No. 107, Economic Poisons 1930-1931, by J. W. Elmore, Division of Chemistry, Department of Agriculture, Sacramento, Calif., page 16, as follows:

"Determine the specific gravity of the oil at 25° C. (77° F.) and weigh the equivalent of 5 c.c. into a Babcock cream bottle. Add slowly 20 c.c. of exactly 37 N sulphuric acid in four equal portions, shaking after each addition and taking care that the temperature does not rise above 100° C. by cooling in ice water if necessary. When the temperature no longer rises on shaking, agitate thoroughly, immerse the bottle in a water bath at 100° C. for one hour, shaking every 10 minutes for 10 seconds. Fill the flask with strong sulphuric acid, sp. gr. 1.84, until the oil rises in the graduated neck, centrifuge to constant volume of the oil at approximately 1,500 r.p.m., cool to 25° C., read the volume of oil from the graduations on the neck of the flask and calculate the per cent by volume."

The quantity of unsulphonated residues found in spray preparations, by the California Department of Agriculture, ranged from 86 to 100 per cent in the summer oils and 31 to 70 per cent in the winter oils.

DISTRIBUTION OF SULPHUR IN PRODUCTS

We would like to know if a certain crude oil contained a definite amount of sulphur, if on processing this oil through a modern pipe still, would the total of the sulphur in the fractions and fuel oil check the total found for the crude? This is for a pipe still reducing the crude and we believe that some of the sulphur would be passed out as hydrogen sulphide—R. E. E.

The quantity of sulphur in any crude oil will be distributed in the products and residue obtained from that oil; the products including the several fractions and the gas evolved during distillation.

While engaged on an investigation of the character of petroleum from several different sources, it was necessary to establish how much of the original sulphur was distributed in the untreated products obtained from these oils. A part of the data, relating to Cushing crude, from this investigation will illustrate the tendency. The oil was 37 A.P.I. gravity and contained 0.350 per cent total sulphur.

Distribution of Sulphur Untreated Products

Product—	Per cent sulphur as part of S in crude	Per cent of total
Gasoline	0.0067	1.91
Kerosene	0 0086	2.45
Gas oil	0 0060	1.71
Lub distillate	0 0970	27.72
Fuel oil	0 1156	33.03
Gas and loss	0.1161	33.18
Total	0.3500	100.00

These products were obtained by the batch method of operation with steam in the still. This oil is classified as a sweet crude and the forms of sulphur will vary in different oils so the distribution will not be the same in the products from a high sulphur oil or one containing a large quantity of hydrogen sulphide.

Similar analyses of the fractions from Healdton crude oil, containing 0.73 per cent total sulphur, are reported by Bjerregaard:

Sulphur in Products from Healdton Crude

Product—	Sp. gr.	Pct. sulphur	Pct. of total S
Crude oil	0.8718	0.73	....
Gasoline	.7459	0 09	9.4
Naphtha	.7883	0.12	6.2
Kerosene	.8153	0 08	8.9
Heavy kerosene	.8294	0.34	4.5
Gas oil	.8545	0 57	23.7
Residuum	.9082	1.04	43.0
Loss, prob'ly in gas	....	....	4.3

Additional information concerning both of these investigations may be found in Gruse—Petroleum and Its Products, p. 48.

B.S. BEFORE AND AFTER PROCESSING

We would like to know how the b.s. before and after processing an oil through a pipe still would compare.—M.P.

There is no relation between the percentage of sediment present in an oil before distilling and any that may be found in the residue. The practice is to exclude an oil carrying any appreciable quantity of solid matter from the still because of the tendency to form hot spots and burn out tubes. If an oil is run containing solid matter and the velocity through the still is high enough to prevent deposition, there will be a corresponding increase found in the residue. When it is necessary to receive a crude oil at the refinery containing a large quantity of sediment and water it is necessary to reduce this either by settling or pretreatment. A small quantity of sand will act to attract particles of other solid material and as this deposit grows it forms a dangerous obstruction or results in a hot spot.

The solid matter found in crude oil usually contains sand and mineral salts, largely sodium chloride. The residue may contain insoluble particles in addition to these, but this will depend upon operating conditions. When the operation does not go beyond the topping stage there should be no more than a trace of carbon present in the residue, but if the still is run at high temperatures and the velocity is low, there may be considerable carbon form. Any large quantity of carbon, or total sediment, in the residue is an indication of a bad operating condition which should be corrected without delay.

COMPLAINTS ON QUALITY OF KEROSENE

We have been selling kerosene made by ..... and get complaints that this kerosene does not give a good light and smokes in lamps and incubators. We get information from the company that the kerosene is all right. Is there any impurity or refining process that could cause this condition?—C. W. S.

The customary inspection which is established in all of the refineries of the representative companies is so thorough that it is impossible for an off-specification kerosene to be shipped. There are well recognized standards covering the quality of kerosene, which are usually a part of the sales contract, and this fact is another reason to believe that it is difficult for a poor grade product to reach the distributor. Actual contamination has been known to take place after the kerosene has reached the tanks of the sales agent; in fact, it has been found in many cases of real poor quality that mixture with another oil had occurred in the sales tanks. A very small quantity of tractor oil or lubricating oil would be enough to lower the burning quality of a good kerosene.

All of the refining companies receive complaints concerning the quality of their kerosene but the investigations usually disclose the fact that the original shipment was of proper specifications. Dr. C. F. Burgess, while a professor at the University of Wisconsin, found a condition which is so frequently the cause of these complaints. The incident is quoted from Ind. Eng. Chem. Vol. 24, 250; February, 1932.

"I had an opportunity for public service under Governor Robert M. LaFollette, who believed that the benefits of science should be made available to the common people. He had observed that the oil lamps in the country homes and the oil lanterns carried by the farmers gave lights of varying degrees of brilliancy, mostly low. He decided that oil inspectors should be appointed; they were to be equipped with photometric instruments and instructed to see that all kerosene sold in Wisconsin should conform to suitable standards. Legislation was passed to bring this about. A committee of scientists and engineers, three in number, of which I was one, was appointed to define the candlepower standards for kerosene and design the equipment to be carried by the inspectors.

"After collecting a large variety of burners and many samples of kerosene sold by dealers throughout the State, we made careful photometric tests. To our consternation these revealed the fact that all the grades of kerosene gave identical candlepower values; the differences in illumination from the lamps and lanterns were found to be dependent upon the care and frequency with which the wicks were trimmed and the chimneys cleaned."

BOILING POINTS MERCAPTANS AND SULPHIDES

We would like to have the boiling points of mercaptans and other sulphur compounds as they distill from crude when cutting gasoline.—W. F. O.

The several forms of sulphur that may be found in finished gasoline are related to the nature and completeness of the chemical treatment that has been applied in the refinery. The character of the sulphur found in the raw distillate depends almost entirely upon the composition of the crude oil and the influence of the heat in the still. Sometimes hydrogen sulphide and free sulphur will be found in the untreated distillate but the usual forms of sulphur are in the compounds known as mercaptans, sulphides and disulphides. These names indicate the several sulphur compounds of the paraffins. The boiling points of these are taken from U. S. Bureau of Mines T.P. 505, by Espach and Rue, 11, 1931.

BOILING POINTS LOWER PARAFFIN SULPHUR COMPOUNDS, °F.

	Methyl	Ethyl	Propyl	Butyl	Amyl
Mercaptan.	45.7	94.5	154.4	208.4	258.8
Sulphide ..	97.2	196.9	287.6	359.6	420.8
Disulphide	244.4	308.3	374	*212	†262.4
			379.4	217.4	266

*At 15 mm. †At 12 mm.

The temperatures given represent the approximate temperatures where each of these compounds may be expected to distill from the oil. The mercaptans are usually found in the largest quantities in the lightest gasolines while the sulphides and disulphides are more liable to be present in the heavier fractions of the gasoline range.

EXPANSION COEFFICIENTS OF PETROLEUM PRODUCTS

Will you kindly give a table showing the proper coefficient of expansion to be used for temperature calculations with each of the petroleum products? This is wanted for the common products, such as gasoline, kerosene, gas oil, lubricating oil and fuel.—S. F. W.

It is not advisable to make use of the ordinary petroleum products as a means for fixing the coefficients of expansion. It is much better to observe the A.P.I. gravity of the product and then apply the coefficient adopted by the U. S. Bureau of Standards for that gravity. The tables published in Circular 154 are calculated from coefficients for six groups, according to Circular IC 160, as follows:

COEFFICIENT OF EXPANSION GROUPS

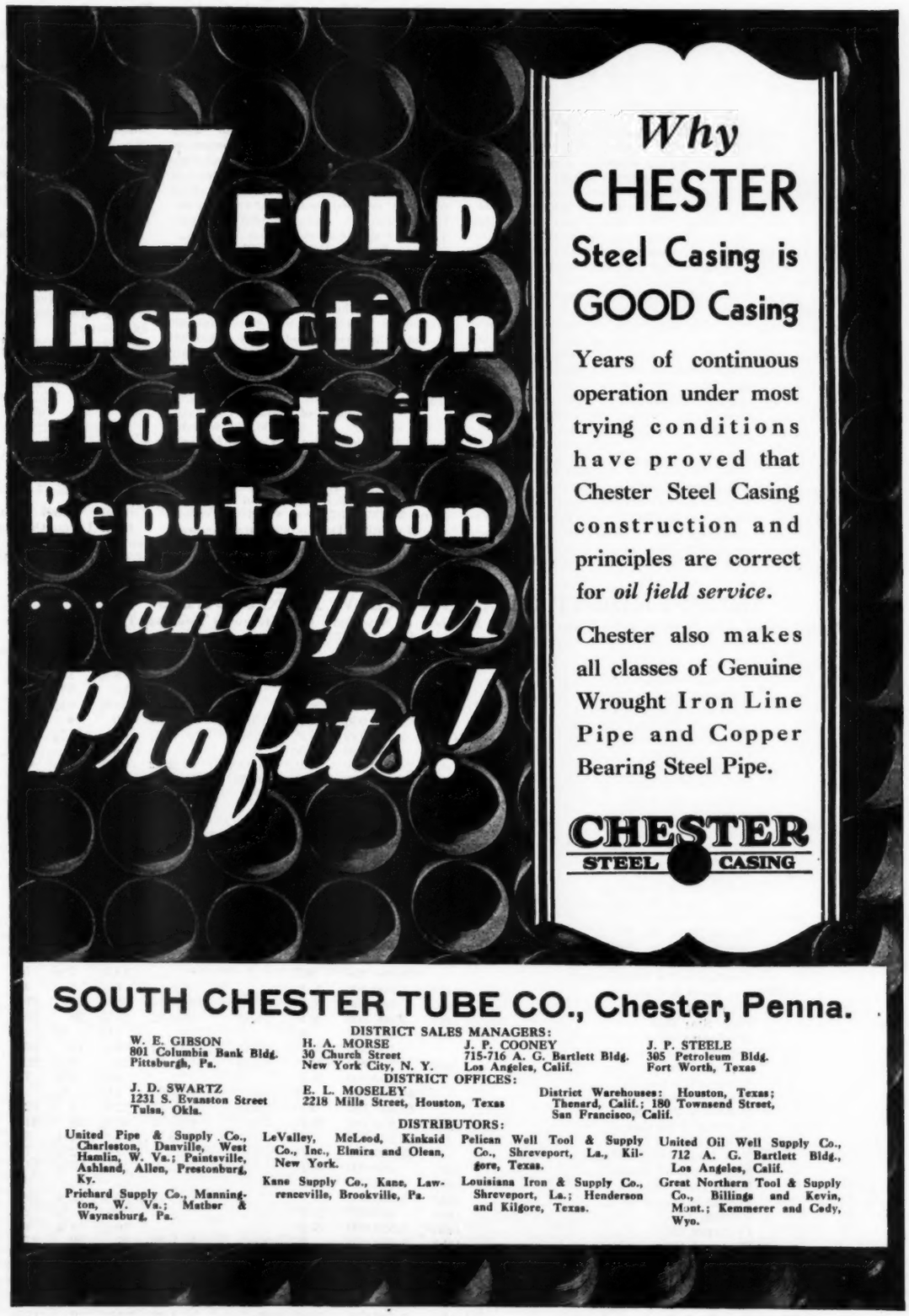
Group	C.E. at 60°F.	Equal A.P.I.°	Range of group A.P.I.°
I	0 0004	22	Up to 34.9
II	.0005	44	33/50.9
III	.0006	58	51/63.9
IV	.0007	72	64/78.9
V	.0008	86	79/88.9
VI	.00085	91	89 and above

A table may be arranged for the common products on the basis of these groups.

COEFFICIENT OF EXPANSION COMMON PRODUCTS

Group—	Products—
I	Fuel oil to gas oil.
II	Gas oil to naphtha.
III	Naphtha and gasoline.
IV	Gasoline.
V	Light gasoline.
VI	Highly volatile liquids and special solvents.

The heavy liquids, such as fluxes and asphalts, are frequently tested at high temperatures and other coefficients should be used when making temperature corrections for this condition. These range from 0.00035 at 150° F. to 0.00038 at 450° F., as explained in Bureau of Standards Miscellaneous Publication 97, Thermal Properties of Petroleum Products, November 9, 1929.


7 FOLD
Inspection
Protects its
Reputation
... and Your
Profits!
Why
CHESTER
Steel Casing is
GOOD Casing
Years of continuous operation under most trying conditions have proved that Chester Steel Casing construction and principles are correct for oil field service.
Chester also makes all classes of Genuine Wrought Iron Line Pipe and Copper Bearing Steel Pipe.
CHESTER
STEEL CASING
SOUTH CHESTER TUBE CO., Chester, Penna.
DISTRICT SALES MANAGERS:
W. E. GIBSON
801 Columbia Bank Bldg.
Pittsburgh, Pa.
H. A. MORSE
30 Church Street
New York City, N. Y.
J. P. COONEY
715-716 A. G. Bartlett Bldg.
Los Angeles, Calif.
J. P. STEELE
305 Petroleum Bldg.
Fort Worth, Texas
DISTRICT OFFICES:
J. D. SWARTZ
1231 S. Evanston Street
Tulsa, Okla.
E. L. MOSELEY
2218 Mills Street, Houston, Texas
District Warehouses: Houston, Texas; Thenard, Calif.; 180 Townsend Street, San Francisco, Calif.
DISTRIBUTORS:
United Pipe & Supply Co., Charleston, Danville, West Hamlin, W. Va.; Paintsville, Ashland, Allen, Prestonburg, Ky.
Prichard Supply Co., Mannington, W. Va.; Mather & Waynesburg, Pa.
LeValley, McLeod, Kinkaid Co., Inc., Elmira and Olean, New York.
Kane Supply Co., Kane, Lawrenceville, Brookville, Pa.
Pelican Well Tool & Supply Co., Shreveport, La., Kilgore, Texas.
Louisiana Iron & Supply Co., Shreveport, La.; Henderson and Kilgore, Texas.
United Oil Well Supply Co., 712 A. G. Bartlett Bldg., Los Angeles, Calif.
Great Northern Tool & Supply Co., Billings and Kevin, Mont.; Kemmerer and Cody, Wyo.

Oils Steady As Selling Pressure Eases

Improved Earnings Outlook Attracts Support Although Undertone Continues Nervous as Uncertainty Over New Legislation Remains

By A. E. Mockler

NEW YORK, May 2.—The petroleum stocks, as a group, showed a steadier tone during the past week and some price recovery developed on the general list. The market undertone remained nervous and irregular, however, due largely to uncertainty over final Congressional tax measures enactments.

The improved earning position of the petroleum industry has attracted some buying support on the key issues, and the continued selling pressure on a few issues, notably Standard of New Jersey which was pounded down to a new low during the preceding week, failed to make any headway during the past week.

Interests on the constructive side of the market were somewhat inclined to broaden their operations and it appeared to be felt that the nationwide publicity which short interests have been receiving would tend to clip the claws of the bears somewhat.

Standard of Ohio has been attracting support and sold up somewhat, and Standard of Indiana has likewise worked into firmer ground, the position of the latter having been strengthened by the disclosure that the Indiana company would have a substantial interest in Jersey's operating company which will take over the foreign properties of Pan American, subsidiary of Standard of Indiana. Royal Dutch has recovered somewhat after the pounding which it received during the bear drive, and on reassuring reports from London as to the company's position. On the Curb, South Penn has been in better demand, and International Petroleum has likewise come in for additional buying support on recessions.

Socony-Vacuum

Socony-Vacuum Corp., capitalized at $1,038,601,735, sustained net loss of $4,169,248 for 1931, after Federal and other taxes, depreciation, depletion, amortization and minority interest, and a deficit of $47,481,420 after payment during the year of $43,312,172 in cash dividends, it was disclosed in the annual report, issued here.

Comparisons with results of 1930 must be made individually on the Standard Oil Co. of New York and Vacuum Oil Co., constituent units, as 1931 represented the first full year of operation of the merged companies. In 1930 Standard of New York reported net income after all charges, taxes and reserves of $16,496,727, equal to 92 cents a share on 17,849,402 common shares and a deficit after dividends of $12,004,652.

Vacuum Oil Co. reported for 1930 net income of $20,393,488, equal to $3.62 a share on 5,325,699 average shares outstanding, and a deficit after dividends of $2,240,735.

Socony-Vacuum Corp. has declared a dividend of 20 cents per share on the common, payable June 15 to stock of record May 6. Previously the company paid 25 cents quarterly.

Socony-Vacuum, organized in July, 1931, to give effect to the merger of Standard Oil Co. of New York and Vacuum Oil Co., paid an initial dividend of 40 cents on September 15, 1931. This rate was reduced to 25 cents in the following quarter, and the company paid a similar dividend on March 15, last.

Approve Petroleum Plan

Stockholders of Petroleum Corp. of America at their annual meeting here this week approved the retirement of 389,140 shares of the corporation's own stock previously purchased, and the reduction of authorized capital stock to 4,000,000 shares from 10,000,000. Earl W. Sinclair was elected a director. Reduction of the number of directors to 15 from 38 was approved.

Standard of Indiana

Net earnings of $17,500,000 will be shown by Standard Oil Co. of Indiana and subsidiaries, according to an estimate by Edward G. Seubert, president, based on preliminary reports. This is equivalent to $1.04 per share, and compares with $46,371,437, or $2.73 a share, earned in 1930. Details will be announced at the annual meeting the first Thursday in May.

The figures for 1931 represent a consolidation with the earnings of the parent company of its proportionate share in the earnings of associated and subsidiary companies, including Pan American, Midwest Refining, Stanolind Oil & Gas Co., Stanolind Pipe Line Co., Stanolind Crude Oil Purchasing Co. and others, and are after depreciation, depletion, amortization, and federal income and foreign taxes.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb, based on closing quotations for Wednesday, was as follows:

Oct. 21	17.58	Jan. 27	12.79
Oct. 28	16.80	Feb. 3	13.19
Nov. 4	18.86	Feb. 10	12.02
Nov. 11	18.76	Feb. 17	13.28
Nov. 18	17.60	Feb. 24	13.45
Nov. 25	16.68	Mar. 2	12.61
Dec. 2	16.09	Mar. 9	14.38
Dec. 9	15.38	Mar. 16	12.00
Dec. 16	12.60	Mar. 23	13.02
Dec. 23	12.06	Mar. 30	13.85
Dec. 30	21.31	Apr. 6	12.12
Jan. 6	12.69	Apr. 13	11.31
Jan. 13	13.63	Apr. 20	12.11
Jan. 20	13.14	Apr. 27	12.46

Shell Reports Loss

Shell Union Oil Corp. and subsidiaries report for 1931 net loss of $27,008,310 after deductions of $45,344,100 for depre-

INDEPENDENT OILS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended April 23)

1932 High	1932 Low	Week ended Apr. 23 Sales	Week ended Apr. 23 High	Week ended Apr. 23 Low	Close Apr. 27	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1929 High	1929 Low	1930 High	1930 Low	1931 High	1931 Low
¾	⅛	3,300	7/16	⅜	7/16	American Maracaibo	(sh)	700,000	N.P.	....	.....	8⅝	1⅛	4½	½	1¾	¼
2¾	1⅛	1,300	1½	1¼	..	Arkansas Natural Gas	(sh)	4,084,235	N.P.	....	.....	26	3¾	16¾	4⅝	6½	1⅞
2⅝	1	3,300	1¼	1	1¼	Arkansas Natural Gas "A"	(sh)	3,522,521	N.P.	....	.....	24¾	6½	16⅝	4⅝	6¾	1⅞
5½	3⅞	1,200	4⅛	3⅞	..	Arkansas Natural Gas pfd.	(sh)	2,193,000	$10	15cQ	4- 1-32	9	4	8⅛	6¼	7	3⅞
9¾	8	No sales	..	..	..	British American Oil Corp.	(sh)	2,622,642	N.P.	20cQ	4- 1-32	62	7⅞	23	13⅝	16⅞	6¼
⅝	¼	No sales	..	..	..	Carib Syndicate		$131,250	25c	....	.....	4⅞	1	2¾	⅝	2⅝	¼
6⅞	3½	53,500	4¾	4	4¼	Cities Service	(sh)	24,290,359	N.P.	30cA§	5- 2-32	68½	20	44¼	13	20¾	5
53⅜	38	1,500	41⅜	38	38½	Cities Service pfd.	(sh)	1,500,000	N.P.	50cM	5- 2-32	98¾	84	93⅞	78¼	84¾	35⅜
⅛	1/16	No sales	..	..	..	Colombia Syndicate		3,250,000	N.P.	....	.....	..	..	21	3⅝	7⅛	1
1⅞	⅝	600	¾	⅝	..	Columbia Oil & Gasoline v.t.c.	(sh)	$2,000,000	$1	....	.....	2	½	¾	⅛	½	1/16
⅝	⅜	No sales	..	..	..	Colon Oil	(sh)	2,200,000	N.P.	....	.....	15	3⅞	8¼	1⅛	3⅛	¼
1	1	No sales	..	..	..	Consolidated Royalty Oil Co.		$5,527,880	$10	5cQ	4-25-32	11⅛	2½	5⅞	2	2¾	1
1	½	No sales	..	..	¾	Cosden Oil	(sh)	323,950	N.P.	....	.....	135	42	74¾	1¼	3¾	⅜
2⅞	1⅝	100	2⅛	2⅛	2	Darby Petroleum	(sh)	609,696	N.P.	....	10-15-30	26	6½	21¾	4¼	5	1¾
2⅛	1½	No sales	..	..	..	Derby Oil & Refining	(sh)	500,000	N.P.	....	.....	11	2	11	2	6	1½
24½	15	No sales	..	..	15	Derby Oil & Refining pfd.		48,500	N.P.	....	.....	44	20¾	60	30	40⅛	25
35⅞	25⅝	2,000	30⅝	28¼	29⅝	Gulf Oil Corp.	(sh)	4,504,921	$25	....	10- 1-31	209	115	166⅞	58½	75½	25⅝
4½	3	200	3	3	..	Indian Terr. Oil "B"	(sh)	7,090,037	N.P.	....	.....	..	..	53½	12⅝	16⅞	5
¼	1/16	2,700	⅛	1/16	..	Intercontinental Petroleum		$5,682,000	$5	....	.....	2⅞	⅜	1¾	⅜	⅝	⅛
⅝	⅜	No sales	..	..	..	Kirby Petroleum	(sh)	750,000	N.P.	....	.....	3⅝	1¼	3	⅞	1⅞	¼
½	1/16	100	¼	¼	..	Leonard Oil & Development		$50,000,000	$25	....	.....	14⅞	2½	5	¾	2	½
⅞	½	900	1/16	1/16	9/16	La. Land & Exp.	(sh)	3,000,000	N.P.	....	.....	6⅛	1	4¾	½	1½	¼
2¼	1½	No sales	..	..	..	Lion Oil & Refining	(sh)	250,000	N.P.	....	10-27-30	38⅞	18	29	4⅞	6¾	1½
9¼	3¾	1,200	4⅞	4½	..	Lone Star Gas	(sh)	5,000,000	N.P.	15cQ	3-31-32	67⅞	28	55⅞	19⅝	25	5½
⅛	1/16	No sales	..	..	..	Magdalena Syndicate	(sh)	850,000	$1	....	.....	1¼	½	½	⅛	½	¼
6⅛	3¾	No sales	..	..	..	Margay Oil Corp.		160,000	N.P.	25cQ	4-11-32	38½	14	16	3	5	1⅞
5¼	3¼	500	3½	3¼	3	Memphis Natural Gas	(sh)	920,000	N.P.	15cQ	4-15-32	24	8⅛	22¼	7½	12⅛	4½
2	2	100	2	2	2	Mexico-Ohio Oil Co.		500,000	N.P.	....	.....	6⅜	2¼	7½	1¾	4⅞	1½
⅛	⅛	No sales	..	..	..	Mountain & Gulf		$4,000,000	$1	....	4-15-31	1½	½	¾	⅜	½	⅛
3	2⅛	800	3⅛	2¼	..	Mountain Producers		$1,682,182	$10	20cQ	4- 1-32	22⅞	7	12⅛	3⅜	5⅞	2
13½	10	300	11¼	11	11	National Fuel Gas	(sh)	3,810,183	N.P.	25cQ	4-15-32	43⅞	23	41⅜	19⅜	26½	9¾
¾	⅜	100	⅝	⅝	¾	New Bradford Oil		$7,224,186	$5	....	4-15-31	5	2½	3½	1⅛	1½	½
⅞	½	2,100	½	½	..	New Mexico and Arizona		$1,000,000	$1	....	.....	9⅜	2¼	7¼	1½	3	¾
1	⅝	No sales	..	..	..	North Central Texas	(sh)	400,000	N.P.	....	9- 2-30	18½	6⅛	11¼	2⅛	3¼	⅝
⅜	¼	1,200	5/16	⅛	..	North European Oil	(sh)	1,372,391	N.P.	....	.....	..	..	6¼	⅝	2⅛	¼
6¼	3⅞	200	3⅞	3⅞	3⅞	Pacific Western Oil	(sh)	1,000,000	N.P.	....	.....	26⅝	12⅛	19½	5½	15	2⅞
⅛	1/16	No sales	..	..	..	Pandem	(sh)	489,875	N.P.	....	.....	3½	½	2½	¼	½	1/16
½	¼	No sales	..	..	..	Pantapec Oil	(sh)	1,506,000	N.P.	....	.....	10½	1⅞	4⅜	⅞	2	⅜
7¾	6	1,700	6½	6	..	Plymouth Oil	(sh)	1,050,000	$5	25cQ	4- 1-32	37	22	27½	16¼	19	6
½	¾	No sales	..	..	¼	Reiter-Foster	(sh)	388,584	N.P.	....	12- 2-29	8½	1⅛	5⅜	1	3⅛	¼
1	¾	No sales	..	..	..	Richfield Oil pfd. x.w.	(sh)	399,950	$25	....	.....	31½	22	23½	6½	11	¼
1	¾	No sales	..	..	..	Ryan Consolidated	(sh)	500,000	N.P.	....	.....	11	2	8⅝	2	3	¾
½	⅛	No sales	..	..	..	Salt Creek Consolidated	(sh)	1,286,300	$10	....	4- 1-31	5⅞	1⅞	2½	½	1⅝	⅛
4⅛	3⅛	700	3½	3¼	3¼	Salt Creek Producers	(sh)	1,496,859	$10	25c	5- 2-32	25⅞	9	15¼	5¼	7¾	2¾
½	¼	No sales	..	..	⅜	Sunray Oil	(sh)	1,163,185	$5	....	4-15-31	12	5⅝	10	2	5¼	¼
6⅝	4⅜	700	5	4¾	..	Texon Oil & Land	(sh)	936,036	N.P.	25c	3-31-32	23	7⅛	19½	8	12⅞	2½
½	¼	No sales	..	..	..	Venezuelan Petroleum	(sh)	755,090	$5	....	2-15-30	6½	1¾	4½	⅜	1⅞	¼
2	1⅛	100	1½	1½	..	Woodley Petroleum		$500,000	$1	....	3-31-29	9½	2	5	½	3½	1⅛
½	⅛	800	3/16	1/16	..	Y Oil & Gas		100,000	N.P.	....	.....	2⅞	½	2½	⅜	2¼	¼

*Ex-dividend. †Unit of trading less than 100 shares. ‡Payable monthly and monthly stock dividend of one-half per cent. §Paid in lieu of regular cash dividend of 2 per cent.

ciation, depletion, intangible drilling costs and surrendered leases. This compares with net operating income of $1,497,978 in 1930 after similar charges to the amount of $46,700,224.

Gross operating earnings for 1931 totaled $177,582,782, compared with $240,297,494 in 1930. Operating expenses last year were $152,850,337 against $192,099,292 in 1930.

First quarter net operating loss this year was $2,742,300, compared with net loss of $9,903,472 for the first quarter of 1931.

Cities Service

The pamphlet report of the Cities Service Co. for 1931 shows that there are now more than 1,000,000 holders of securities of the company and its subsidiaries. Holders of the company's stocks totaled 614,712 on March 15, 1932, against 543,276 a year before. Holders of the top company common stock numbered 523,142 on March 15, an increase of 56,506 over the corresponding date of a year ago.

Since the close of the year, two funded debt obligations aggregating $6,250,000 have been paid, it was stated. The only remaining funded debt maturity in 1932 is $35,000,000 of Toledo Light & Power 5 per cent notes, due December 1. There are no other funded debt maturities of any large amount until 1942, except $8,000,000 of bonds maturing in 1937.

Warner-Quinlan

Warner-Quinlan Co. reports for 1931 net loss of $711,524, after taxes and charges, comparing with net loss of $1,655,832 in 1930.

STANDARD OIL STOCKS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended April 23)

1932 High	1932 Low	Week ended Apr. 23 Sales	Week ended Apr. 23 High	Week ended Apr. 23 Low	Close Apr. 27	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1929 High	1929 Low	1930 High	1930 Low	1931 High	1931 Low
6¼	6	No sales	..	..	..	Borne Scrymser		$1,000,000	$25	....	10-15-30	46½	25	25	11¼	16	6
35	25	500	27⅜	27	..	Buckeye Pipe Line		$10,000,000	$50	$1Q	6-15-32	74½	55	69	39⅞	56	30
90	75	No sales	..	..	77	Chesebrough Mfg.		$3,000,000	$25	$1Q‡	3-31-32	210	130	184⅞	104¼	129½	75
2⅜	1¾	4,000	2	2	2⅛	Creole Petroleum	(sh)	5,977,872	N.P.	....	.....	11¾	5⅜	7⅞	3	3⅞	1⅝
35	23	50	26¼	26¼	..	Eureka Pipe Line		$5,000,000	$100	$1Q	5- 2-32	70½	40	54¾	26	36	19
49	37⅞	600	39¼	38	38⅜	Humble Oil & Refining		$74,103,300	$25	50cQ	4- 1-32	128	74⅛	119	57¼	72	44¼
9½	6⅝	13,100	7¾	7⅛	7½	Imperial Oil of Canada	(sh)	25,421,768	N.P.	12½cQ	3- 1-32	41	22	30	15	18¼	7⅝
7½	3	200	3½	3¼	..	Indiana Pipe Line (new)		$3,000,000	$10	25cQ	2-15-32	41⅞	26	41	14½	21⅛	5½
10½	8⅜	17,800	9⅜	8⅞	10	International Petroleum (new)	(sh)	14,247,088	N.P.	25cQ	3-15-32	30⅜	15	24	11⅜	15½	7⅜
10½	6⅞	200	8⅜	8⅛	..	National Transit		$6,362,500	$12.50	25cQ	4-15-32	25⅛	10⅛	22⅜	11½	17½	5
4	3	100	3¼	3¼	..	New York Transit		$500,000	$5	10cQ	4-15-32	17½	10	21⅜	10⅛	14½	5⅞
4¾	3¼	No sales	..	..	..	Northern Pipe Line		$1,200,000	$10	$1.50SA	1- 2-32	63	41	54	26¼	35½	20
6⅜	4	100	5¼	5¼	..	Penn Mex Fuel		$10,000,000	$25	50c	10-31-31	44½	20	32	12	15½	5½
14½	9⅝	1,500	12¼	12	13	South Penn Oil		$30,000,000	$25	25cQ	3-31-32	60¼	35⅛	45⅞	16⅛	23⅞	9¼
10	8	No sales	..	..	..	Southern Pipe Line		$1,000,000	$10	50cQ	3- 1-32	22½	13	20⅞	8⅜	17	7
37	32	No sales	..	..	..	Southwest Pennsylvania Pipe Line		$1,750,000	$50	$1Q	4- 1-32	70	60	64	32	42½	25
17¼	13⅛	30,600	15⅞	14⅞	16½	Standard Oil of Indiana		$422,795,250	$25	25cQ	3-15-32	63	45	59⅞	30	38½	13½
15⅞	10	2,400	12⅜	11⅛	12¼	Standard Oil of Kentucky		$25,654,516	$10	40cQ	3-31-32	46⅞	29	40½	18⅝	23⅝	12⅛
19	14½	No sales	..	..	..	Standard Oil of Nebraska		$4,649,225	$25	50cQ	3-21-32	50¼	40	48⅞	34⅝	36½	16
28⅛	15½	450	24	22	24½	Standard Oil of Ohio		$14,000,000	$25	62½cQ	4- 1-32	129	60	108½	43¼	62½	23
2	1¾	200	2	1¾	..	Swan-Finch Co.	(sh)	34,480	$25	....	1-15-29	18	10	10	4	4½	1

*Ex-dividend. †Unit of trading less than 100 shares. ‡Plus 50 cents extra.

TRANSACTIONS IN OIL SHARES ON NEW YORK STOCK EXCHANGE

Quotations Compiled by Francis, Bro. & Co., Members of the New York Stock Exchange and Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended April 23)

1932 High	1932 Low	Week ended Apr. 23 Sales	Week ended Apr. 23 High	Week ended Apr. 23 Low	Close Apr. 27	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1929 High	1929 Low	1930 High	1930 Low	1931 High	1931 Low
15	12	800	13	12¼	15	Amerada Corp.	(sh)	922,075	P.N.	50cQ	1-30-32	42⅝	17½	31½	16½	23	11¼
4	½	No sales	..	..	..	American Republics Corp.	(sh)	209,180	N.P.	..	12-31-30	64⅜	12½	37	5⅛	12⅜	1¼
9¾	6¾	No sales	..	..	..	Associated Oil		$57,260,300	$25	25cQ	4-15-32	47¼	34½	51	30	31	8¾
12⅞	8⅝	4,100	10¼	9½	10½	Atlantic Refining		$67,416,050	$25	25cQ	3-15-32	77⅞	30	51⅜	16⅝	23⅝	8⅝
5⅞	4	4,600	4⅛	4	4½	Barnsdall Corp. A		$11,293,895	$5	....	5-11-31	49¼	20	34	8⅝	14½	4
16⅛	6½	40,900	9¼	7⅛	..	Columbia Gas & El.	(sh)	11,684,220	N.P.	25cQ	5-15-32	140	52	87	30⅝	45⅝	11⅝
10½	9	No sales	..	..	..	Colonial Beacon Oil	(sh)	1,444,970	N.P.	....	12-22-22	32⅞	12½	20⅜	8¾	10½	7½
7⅛	4⅛	25,000	5⅛	4¼	5	Consolidated Oil Corp.	(sh)	14,190,000	N.P.	....	.....	..	..	..	..	..	..
7	4⅞	10,900	5¼	4⅞	5¼	Continental Oil of Delaware	(sh)	4,741,554	N.P.	....	12-15-27	47⅞	18	30½	7¾	12	5
35¾	16½	3,600	18½	16⅝	18	General American Tank Car	(sh)	811,647	N.P.	$1Q	1- 1-32	123¾	75	111⅞	53⅛	73⅛	28
15½	7⅜	1,500	9	8½	9	General Asphalt	(sh)	413,333	N.P.	25cQ	3-15-32	94¾	42¼	71½	22⅜	47	9⅝
24⅜	12½	2,800	14	13	14	Houston Oil		$24,968,600	$100	....	10-17-30	109	26	116⅞	29¼	68½	15¾
1⅝	1	No sales	..	..	..	Indian Refining		$12,564,070	$10	....	10- 1-30	53	13⅛	17	2	4⅝	1⅛
1⅝	1	400	1¼	1¼	..	Louisiana Oil Refining	(sh)	1,190,063	N.P.	....	.....	18	7	12	3½	4½	1
1	½	No sales	..	..	..	Maracaibo Oil	(sh)	330,000	N.P.	....	.....	18½	5⅛	10⅜	1⅜	3¾	½
6½	3¾	3,600	5	4⅜	4¾	Mid-Continent Petroleum	(sh)	1,857,912	N.P.	....	2-16-31	39⅞	22⅛	32	11	16¾	5
9¼	5	No sales	..	..	..	National Supply of Delaware	(sh)	390,879	$50	....	5-15-31	144	98½	124¾	60	70¼	5
7⅞	5	10,900	6⅜	5½	6	Ohio Oil	(sh)	6,648,052	N.P.	....	3-14-31	79⅞	64¼	32	16	19½	5⅛
28	17⅛	200	28	26	..	Pan American P. & T.		$50,084,700	$50	40c	4-20-32	69	40½	46½	42	35⅛	20
29	16	800	29	27	..	Pan American P. & T. "B"		$121,110,650	$50	40c	4-20-32	69¼	40½	67¼	30	36½	18
1¼	½	No sales	..	..	..	Panhandle P. & R.	(sh)	199,370	N.P.	....	.....	15¼	3	12¾	1¾	4¼	⅝
6½	3⅞	4,800	4½	4	4¼	Phillips Petroleum	(sh)	2,593,075	N.P.	....	1- 2-31	47	24¼	44⅝	11½	16⅝	4
½	¼	800	⅜	¼	..	Pierce Oil Corp.		$29,622,831	$25	....	.....	3⅜	1	2½	½	1½	¼
1⅛	⅝	1,100	⅝	⅝	..	Pierce Petroleum	(sh)	2,500,000	N.P.	....	2-16-31	5⅞	½	7⅛	1⅛	3⅜	½
7⅛	4	400	4¾	4	4¾	Prairie Oil & Gas		$60,848,000	$25	....	3-31-31	65⅜	40½	54	11¼	20⅜	4⅛
9¾	5¾	3,400	6¼	5⅞	6⅞	Prairie Pipe Line		$101,250,000	$25	....	6-30-31	65	45	60	16⅝	26½	5⅞
1⅝	⅝	1,000	¾	⅝	..	Producers & Refiners		$37,438,950	$50	....	9-15-23	25⅞	4	11⅞	1	6	1
9¾	3½	20	5¾	5¾	..	Producers & Refiners pfd.		$2,845,350	$50	....	5- 4-25	46¾	25½	40	11½	16	3
5¼	3¼	3,500	4⅜	3⅞	4¼	Pure Oil		$75,959,250	$25	....	9- 1-30	30⅜	20	27¼	7⅝	11⅞	3¼
¾	½	No sales	..	..	..	Richfield Oil (new)		$52,410,875	N.P.	....	.....	49⅝	20	9¾	4⅛	6⅜	⅝
2½	2	3,900	2¼	2⅛	..	Rio Grande Oil	(sh)	1,236,270	N.P.	....	7-25-30	42½	15	25¾	5	10¼	1¼
23	12⅛	114,300	15¾	12⅛	15⅛	Royal Dutch N. Y.	(sh)	611,303	....	$0.9385	8- 4-31	64	43⅛	56½	36⅞	42⅝	13
9⅞	6⅝	4,800	8	7¼	8⅝	Seaboard Oil of Delaware	(sh)	1,244,383	N.P.	....	10- 1-24	59⅜	8¼	37	9¾	20¾	5½
15¾	8	110	12⅛	8	..	Shell Transport & Trading Co.		£23,985,000	£1	$0.726	7-23-31	51½	40⅝	48⅜	26	34	5
4⅛	2½	7,900	3⅛	2½	2¾	Shell Union Oil	(sh)	13,066,497	N.P.	....	6-30-30	31¾	19	25½	5¼	10¼	2½
31	19	4,700	25	23¼	23½	Shell Union Oil pfd.	(sh)	400,000	$100	....	7- 1-31	108¼	93	106¾	55	78	15
6	3¼	500	3¾	3¾	..	Simms Petroleum	(sh)	600,000	$20	....	9-15-30	40⅛	15	37	5⅝	11	3½
4½	2½	1,000	3⅛	3	3⅜	Skelly Oil		$27,441,250	$25	....	12-15-30	40½	28	12	10⅛	12⅞	2
19	12	No sales	..	..	..	Skelly Oil pfd.	(sh)	119,800	$100	....	5- 1-31	..	..	99¾	42	62	10
10⅜	8⅛	43,300	8⅞	8⅛	8¾	Socony-Vacuum	(sh)	31,923,072	$25	20cQ	6-15-32	..	..	106⅜	98	106	87⅛
91½	84½	800	86¾	85½	..	Standard Oil Export pfd.	(sh)	764,885	$100	$2.50SA.	12-31-31	..	..	..	..	21	8⅝
27¼	16¾	23,800	19	17½	18¾	Standard of California	(sh)	12,594,098	N.P.	50cQ	3-15-32	81⅞	51½	75	42½	51¾	23⅛
12⅜	7	400	7½	7	..	Standard of Kansas		$8,000,000	$25	....	3-16-31	33¾	18	49	14⅜	19	7¾
31½	19⅞	220,000	23⅝	19⅞	23½	Standard Oil of New Jersey		$634,999,200	$25	25cQ‡	3-15-32	83	49	84⅞	32½	52½	26
32	24¾	1,100	28	26¾	..	Sun Oil	(sh)	1,416,869	N.P.	25cQ	3-15-32	68⅜	55	70	39	45¼	26¾
⅝	¼	100	¼	¼	..	Superior Oil Corp.	(sh)	766,979	N.P.	....	12-20-30	24	5¼	9⅜	¾	1¾	¼
13¾	10	25,000	11⅞	10⅝	11¾	The Texas Corporation		$240,204,900	$25	25cQ	4- 1-32	71⅞	50	60½	28¼	36¼	9⅞
2⅜	1½	100	1⅞	1⅞	2	Texas Pacific Coal & Oil Co.		$9,304,890	$10	....	12-31-29	23⅞	9½	14½	4	6½	1⅞
9	7	No sales	..	..	..	Tide Water Oil	(sh)	2,191,759	N.P.	25cQ	3-31-32	40	14	31	13	18	9⅞
41	30	200	30	30	..	Tide Water Oil pfd.	(sh)	19,947,000	N.P.	$1.25Q	2-15-32	97½	85⅛	94⅞	71	83	30
3½	2	3,000	2⅜	2⅛	2⅜	Tide Water Associated	(sh)	5,560,424	N.P.	....	2-16-31	23½	10	17¾	5⅞	9	2⅛
28¼	20	700	23¾	22¾	24⅜	Tide Water Associated pfd.		$73,284,500	....	$1.50Q	1- 2-32	90⅞	74⅛	89¾	55	68	20½
13⅞	10	4,700	10⅞	10	10¾	Union Oil of California		$104,342,375	$25	35cQ	2-10-32	57	42⅛	50	10⅛	26⅝	11
19¼	12½	1,100	12½	12¼	12½	Union Tank Car	(sh)	1,254,048	$100	40cQ	3- 1-32	163¾	121⅞	38½	23	25⅛	16
1½	¾	800	⅞	¾	⅞	Warner-Quinlan	(sh)	632,948	N.P.	....	7- 1-30	42⅞	15	27	4¼	7⅜	⅞
5¾	3	1,000	4	3	3⅝	Wilcox Oil & Gas	(sh)	428,907	$5	....	5-10-28	29¾	12⅞	21	6½	9⅜	2¾

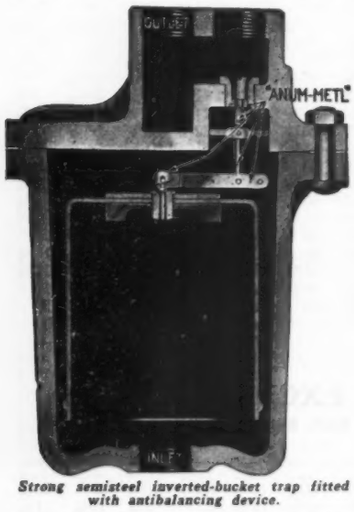
*Ex-dividend. †Unit of trading less than 100 shares. ‡Plus extra dividend of 25 cents.

In comparing highs and lows for the several years in the three tables, it will be necessary to take into consideration cases where there have been stock split-ups.

Oil Industry Equipment and Supplies

IMPROVEMENTS MADE IN INVERTED-BUCKET TRAPS

The Strong, Carlisle & Hammond Co., Cleveland, Ohio, announces two patented improvements to its line of inverted-bucket steam traps. The antibalancing device is used on all sizes of Strong in-



Strong semisteel inverted-bucket trap fitted with antibalancing device.

verted-bucket traps, with the exception of the No. 70 and the No. 71.

This device consists of a valve arrangement in the lever, which replaces the conventional air vent in the bucket. This valve is arranged with a small opening at all times to allow the air and other gases to escape from the bucket while the trap is filling. When the trap reaches the point of discharge, where balancing usually occurs, the larger valve is automatically opened, allowing air to escape suddenly from the bucket and sufficient water to enter the bucket. This overbalances the bucket and opens the main trap discharge valve.

The manufacturers assert this device practically eliminates the tendency to balance, or what is usually known as "dribbling," commonly found in inverted bucket traps.

The Strong inverted-bucket forged-steel trap is also fitted with the antibalancing device and in addition these traps are provided with patented internal monel strainers which eliminate the extra joints required incidental to installing external sediment strainers ahead of high-pressure traps. They are equipped with stainless buckets, anummetl seats and discs as well as all operating mechanism, and are built for pressures up to 1,800 pounds.

DE-ION CIRCUIT BREAKER

For circuit protection in buildings, homes, industrial plants, mines, in fact wherever electricity is used, a safe, flashless device has been developed to perform the function heretofore left to carbon circuit breakers or fuses. It is known as the AB "De-ion" circuit breaker and is a development of the Westinghouse Electric & Manufacturing Co. The "De-ion" breaker has nothing to be replaced or renewed. It can be reclosed by anyone as quickly and easily as a switch. It cannot be held closed against an abnormal overload or short circuit, nor can it be blocked to prevent opening the circuit. Its rating cannot be changed by unauthorized persons. It has a time lag preventing unnecessary tripping on slight, momentary overloads. The "De-ion" is so enclosed in a molded composition box that no live parts are exposed.

NOTES ABOUT TRADE LITERATURE

"The Star Spudder" is the name of a bimonthly periodical launched by the Star Drilling Machine Co., Akron, Ohio, which thus manifests its belief that better business lies a short distance ahead.

The Morris Machine Works, Baldwinsville, N. Y., manufacturer of centrifugal pumps, hydraulic dredges and steam engines, announces that its export office is now at 30 Church Street, New York.

The Dearborn Chemical Co., Chicago, is sending out a four-page bulletin in colors telling about Plumite, designed to keep drain pipes clean and sanitary.

The current number of Industrial News, published by the Gates Rubber Co., Denver, Colo., announces introduction of the F section belt for heavy horsepower drives.

The Technical Products Co., Sharpsburg Station, Pittsburgh, Pa., has issued Isa-lute cement and compounds catalog No. 32, containing information on industrial assembling, insulating and acid-proofing, etc.

The Worthington Pump & Machinery Corp., Harrison, N. J., announces the following literature: Gas engines, vertical 4-cycle type, six-page bulletin S-550-S1, covering 60 and 180-horsepower sizes; portable air compressors, four-page bulletin W-850-B5, showing mechanical features, and mountings on trailer, truck, tractor, railroad car, mine car and wood skids.

The American Cable Co., New York Central Building, is sending to those who ask for it, a 20-page booklet in colors entitled "Cardinal Reasons Why You Save Money With Tru-Lay Preformed Wire Rope."

A four-page bulletin being mailed by the Northern Pump Co., Minneapolis, Minn., is devoted to XE series of nitralloy steel pumps for all types of oil service.

"Characteristic Cost Curves for Modern Types of Pipe Line Pumping Units," is the subject of an informative paper by W. R. Layne, printed in the current issue of the "News Letter," published by the Byron Jackson Co., Berkeley, Calif.

The Caterpillar Tractor Co., Peoria, Ill., has prepared a 16-page booklet designated as a pictorial supplement to its price list, designed to show quickly what models of tractors the company now is making.

The Continental Steel Corp., Kokomo, Ind., is distributing a broadside illustrating the uses of Continental fence around industrial properties, etc.

LEMAY FAUCET EXTRACTS NONFLOWING COMPOUNDS

The LeMay forced feed faucet, announced as new addition to the line of oil-field equipment manufactured by the Key Boiler Equipment Co., East St. Louis, Ill., is designed to provide an inexpensive and convenient method of ex-

tracting heavy, nonflowing compounds from bulk containers. It is adapted for use on drums equipped with standard 1½-inch pipe opening.

In introducing this faucet to the oil industry, the Key Boiler Equipment Co. expects it to be of especial interest to bulk sales departments and refinery storekeepers.

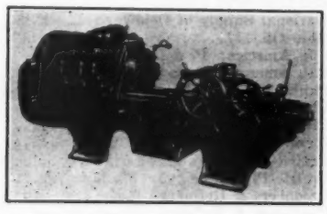
LOW-BED FRONT-WHEEL DRIVE

A new low-bed, 5-ton front-wheel drive truck with a frame height of 21 inches has been put in production by the Four Wheel Drive Auto Co., of Clintonville, Wis. This truck, designated as the LBU model, is powered by a 91-horsepower high-compression motor, and is equipped with two sets of brakes, the service brakes acting on all four wheels while the emergency brake acts directly on the propeller shaft. It is especially adaptable to specialized hauling applications where hand-loading or unloading is necessary; where the loads are bulky or the commodities fragile.

Alco Products, Inc., New York, has opened a new branch office in the Rialto Building, San Francisco, in charge of R. S. Danforth.

DIE-HEAD HAS ROUGHING AND FINISHING DEVICE

A new die head having a capacity up to and including 4 inch diameter and equipped with a roughing and finishing attachment has been developed by the



Landis Machine Co., Inc., of Waynesboro, Pa., for use on the Landis 4-inch leadscrew threading machine. This die head is recommended for cutting coarse pitch threads on valve stems, vise screws, jack screws and similar classes of work which require great accuracy and an exceptionally smooth finish.

The roughing and finishing cuts are controlled by a latch mounted on the yoke bracket. The release of the latch, after the roughing cut is made, permits the die head to close for a light finishing cut. The quantity of metal removed during this cut is approximately .045 inch. No cutting strains are transmitted either to the die head yoke or the roughing and finishing attachment. The die head is locked within itself when set for either the roughing or finishing cut, thus making it possible to produce threads that are free from taper and uniformly accurate for size.

A pitch indicator is employed to assist the operator in timing the engagement of the leadscrew nut for the finishing cut. This die head can be used for cutting single, double, triple and quadruple threads from three-quarters inch to 4 inches in diameter with a maximum lead of one-half inch.

MEN KNOWN *in* THE EQUIPMENT FIELD

William K. Evans, until recently regional manager in charge of sales and operations of the Shell Petroleum Corp., Chicago, has been appointed general sales

William K. Evans

manager of the Graver Tank & Manufacturing Co., with offices at 332 South Michigan Avenue, Chicago. Mr. Evans became actively engaged in the oil business in 1917 when he joined the staff of the Sinclair Refining Co. in Chicago, where he became assistant sales manager before leaving two years later to take a position with the Roxana Petroleum Corp., as the present Shell regional organizer then was known. Mr. Evans resigned from his post with Shell on March 1, of this year.

TWO VALVE TENDENCIES SAID TO BE CONQUERED

The new Swendeman rotary valve put on the market by J. E. Swendeman, Inc., 171 Camden Street, Boston, Mass., was designed to overcome two tendencies in the operation of plug cock valves, one the tendency to bear down on the lever handle when opening or closing the valve, thus increasing friction to the point of sticking, and the other the tendency of a plug cock valve when being turned to screw itself tighter into its seat.

The thrust spring is said to counteract the lever pressure and the tendency of the plug to screw down in its seat, the force of the spring when in adjustment being proportional to the force applied on the lever. In this rotary type valve the plug is always maintained in its normal position. Simplicity of design, strength of construction and balanced accuracy of the tapered surfaces are designed to insure efficiency and enduring operation in service throughout the lifetime of the metals.

At the directors' meeting of the Roessler & Hasslacher Chemical Co., Inc., in New York, Dr. H. R. Carveth announced his retirement as president and director of the company and as a director of the E. I. du Pont de Nemours & Co., Inc., of which R & H is a subsidiary. Dr. M. J. Brown, vice president and a director of R & H, also resigned. Charles K. Davis of New York was elected president to succeed Doctor Carveth.

CLASSIFIED WANTS

Read by Oil Men Everywhere

RATES

The rates for Classified Advertisements are 35 cents a line for the first insertion and 25 cents a line for each additional inserton. Six words usually constitute a a line. The following table will enable you to figure the cost of your advertisement:

	1 time	2 times	3 times	4 times
3 lines	1.05	1.80	2.55	3.30
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6 lines	2.10	3.60	5.10	6.60
7 lines	2.45	4.20	5.95	7.70
8 lines	2.80	4.80	6.80	8.80
9 lines	3.15	5.40	7.65	9.90
10 lines	3.50	6.00	8.50	11.00

For rates on Classified DISPLAY see opposite column.

Compute white space at the above rates.

Mail your Classified Advertisement to

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

FOR SALE—EQUIPMENT

200 AMP. General Electric Arc Welder; portable; 220 V. 3 ph. 60 cy. Complete. Like new. $350. 7x6 Ingersoll-Rand Type ER-1 Air Compressor. Like new. $225. 8x6 Ingersoll-Rand Type ER-1 Air Compressor. Like new. $250. 36"x18' Fifield Screw Cutting Lathe. $650. Also large stock of lathes, shapers, pipe machines, bolt threaders, etc. Send for our list. Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West Second St., Cincinnati, Ohio.

FOR SALE OR TRADE
All sizes reconditioned pipe and casings. Also Oil & Gas Well supplies and Gasoline plant equipment. All at very low prices.
LEE MORRISON SUPPLY CO.
Bartlesville, Oklahoma

FOR SALE—22,000 feet, of 16"O.D.x ⅜" pipe in 40' lengths, P.E. Used one year as surface water line. The Sawhill Mfg. Co., 418 Oliver Bldg., Pittsburgh, Pa.

NO. 2 NATIONAL Drilling Machine and tools. Complete. In good condition. For Sale or Trade. Cheap. Write or phone No. 6, T. L. Horner, Box 223, Barnsdall, Okla.

SITUATIONS WANTED

REFINERY Superintendent and Chemist. Eight years' complete plant experience with major companies. Technical training. Available after May 15. Address Box F-162, The Oil and Gas Journal, Tulsa, Okla.

ENGINEER — Five years, industrial plant; past seven years with engineering contracting organization oil refining-equipment. Experience covers design, operation, cracking units, pipe stills, vacuum equipment, auxiliaries. Desire connection with contractor, refiner or equipment sales. Prefer East. Address Box F-160, The Oil and Gas Journal, Tulsa, Okla.

GRADUATE Chemical and registered civil engineer, seven years' refinery technical experience which includes laboratory research and development. Have designed, built and operated 1,200-lb. vacuum lube unit, also 1,500-lb. skimming and vapor phase cracking unit. Thoroughly familiar with topping, skimming and cracking, both liquid and vapor phase. Lube manufacturer by use of steam and wet vacuum. Gas engineer in Natural Gasoline Industry. Can furnish best of references. At present, located in California but at liberty to travel. Address Box F-152, The Oil and Gas Journal, Tulsa, Okla.

HELP WANTED

FOR REFINERY, Delaware Corp., Officers, Office force, Refinery men, preference those investing, reference required. Pure Pennsylvania Oil Co., care 509 S. Madison, Enid, Okla.

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